Digital Video Recorder

User Manual (V2.2.4)

UD.6L0202B0068A02

Regulatory Information

FCC Information

FCC compliance: This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement

This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC.

2002/96/EC (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: www.recyclethis.info.

2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: www.recyclethis.info.

Thank you for purchasing our product. If there is any question or request, please do not hesitate to contact dealer.

This manual is applicable to DS-7104HWI-SL, DS-7108HWI-SL, DS-7116HWI-SL; DS-7116HVI-SL series DVR.

This manual may contain several technically incorrect places or printing errors, and the content is subject to change without notice. The updates will be added into the new version of this manual. We will readily improve or update the products or procedures described in the manual.

Preventive and Cautionary Tips

Before connecting and operating your device, please be advised of the following tips:

- Ensure unit is installed in a well-ventilated, dust-free environment.
- Unit is designed for indoor use only.
- Keep all liquids away from the device.
- Ensure environmental conditions meet factory specifications.
- Ensure unit is properly secured to a rack or shelf. Major shocks or jolts to the unit as a result of dropping it may cause damage to the sensitive electronics within the unit.
- Use the device in conjunction with an UPS if possible.
- Power down the unit before connecting and disconnecting accessories and peripherals.
- A factory recommended HDD should be used for this device.
- Improper use or replacement of the battery may result in hazard of explosion. Replace with the same or equivalent type only. Dispose of used batteries according to the instructions provided by the battery manufacturer.

Product Key Features

General

- PAL/NTSC adaptive video inputs.
- H.264 video compression with high reliability and superior definition.
- Each channel supports dual-stream.
- Main stream supports encoding at up to WD1 resolution in real time and sub stream at CIF/QCIF resolution.
- Independent configuration for each channel, including resolution, frame rate, bit rate, image quality, etc.
- The quality of the input and output video is configurable.
- Normal and event recording parameters configurable for per individual camera.
- Encoding for both audio/video composite stream and video stream; audio and video synchronization during composite stream encoding.
- Watermark technology.

Local Monitoring

- VGA output at up to 1920×1080P resolution.
- 1/4/6/8/9/16-division live view is supported, and the display sequence of screens is adjustable.
- Live view screen can be switched in group, and manual switch and automatic cycle view is also provided, the interval of automatic cycle can be adjusted.
- Quick setting menu is provided for live view.
- The selected live view channel can be shielded.
- Motion detection, tamper-proof and video loss alarm functions.
- Privacy mask.

HDD Management

- 1 SATA hard disk can be connected, with a maximum of 4TB storage capacity.
- HDD quota management; different capacity can be assigned to different channels.

Recording and Playback

- Holiday recording schedule configuration.
- Normal and event video encoding parameters.
- Multiple recording types: manual, normal and motion.
- 8 recording time periods with separated recording types.
- Pre-record and post-record for motion detection for recording, and pre-record time for schedule and manual recording.
- Searching record files by event.
- Customization of tags, searching and playing back by tags.
- Locking and unlocking record files.
- Searching and playing back record files by channel number, recording type, start time, end time, etc.
- Smart search for the selected area in the video.
- Zooming in when playback.
- Playing reversely.
- Supports pause, slow forward, fast forward, skip forward, and skip backward when playback,

locating by dragging the mouse.

- Up to 4/8/16-ch synchronous playback.

Backup

- Export video data by USB storage device.
- Export video clips when playback.
- Management and maintenance of backup devices.

Alarm and Exception

- Alarm for video loss, motion detection, tampering, video input/output standard mismatch, illegal login, network disconnected, IP confliction, HDD error, and HDD full, etc.
- Alarm event triggers full screen monitoring, audio alarm, notifying surveillance center and sending email.
- Automatic restore when system is abnormal.

Other Local Functions

- Operable by mouse.
- Three-level user management; admin user is allowed to create many operating accounts and define their operating permission, which includes the limit to access any channel.
- Operation, exceptions and log recording and searching.
- Import and export of device configuration information.

Network Functions

- 1 self-adaptive 10M/100Mbps network interface.
- IPv6 is supported.
- TCP/IP protocol, PPPoE, DHCP, DNS, DDNS, NTP, SADP, SMTP, UPnP™, RTSP are supported.
- TCP, UDP and RTP for unicast.
- Remote search, playback, download, locking and unlocking the record files, and downloading files broken transfer resume.
- Remote parameters setup; remote import/export of device parameters.
- Remote viewing of the device status, system logs and alarm status.
- Remote locking and unlocking of control panel and mouse.
- Remote HDD formatting and program upgrading.
- Remote system restart.
- Alarm event and exception information can be sent to the remote host.
- Remotely start/stop recording.
- Upgrade by remote FTP server.
- Two-way audio and voice broadcasting.
- Embedded WEB server.

Development Scalability

- SDK for Windows and Linux system.
- Source code of application software for demo.
- Development support and training for application system.

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C H A P T E R 1

Introduction

1.1 Front Panel

The front panel of DS-7100HWI/HVI-SL series DVR is shown in Figure 1.1:

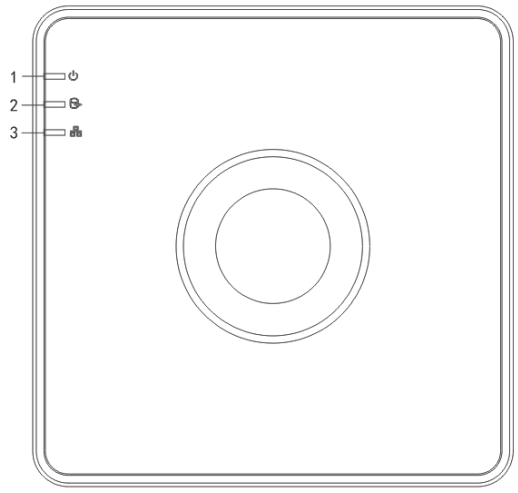


Figure 1.1 Front Panel

Table 1.1 Description of Indicators

No.	Icon	Description
1		Indicator turns red when DVR is powered up.
2		Indicator lights in red when data is being read from or written to HDD.
3		Indicator blinks blue when network connection is functioning properly.

1.2 USB Mouse Operation

A regular 3-button (Left/Right/Scroll-wheel) USB mouse can also be used with this device. To use a USB mouse:

1. Plug USB mouse into one of the USB interfaces on the rear panel of the device.
2. The mouse should automatically be detected. If in a rare case that the mouse is not detected, the possible reason may be that the two devices are not compatible, please refer to the recommended device list from your provider.

The operation of the mouse:

Table 1.2 Description of the Mouse Control

Name	Action	Description
Left-Click	Single-Click	Live view: Select channel and show the quick set menu. Menu: Select and enter a menu.
	Double-Click	Live view: Switch single-screen and multi-screen.
	Click and Drag	Tamper-proof, privacy mask and motion detection: Select target area. Digital zoom-in: Drag and select target area. Live view: Drag channel/time bar.
Right-Click	Single-Click	Live view: Show menu. Menu: Exit current menu to upper level menu.
Scroll-Wheel	Scrolling up	Live view: Previous screen. Right-click Menu: Previous item.
	Scrolling down	Live view: Next screen. Right-click Menu: Next item.

1.3 Input Method Description

Figure 1.2 Soft Keyboard

Description of the buttons on the soft keyboard:

Table 1.3 Description of the Soft Keyboard Icons

Icons	Description	Icons	Description
En	English	A	Capital English
123	Numbers	!?	Symbols
a	Lowercase/Uppercase	⌫	Backspace
␣	Space	Enter	Enter
ESC	Exit		

1.4 Rear Panel

The rear panel of DS-7108HWI-SL is shown in Figure 1.3.

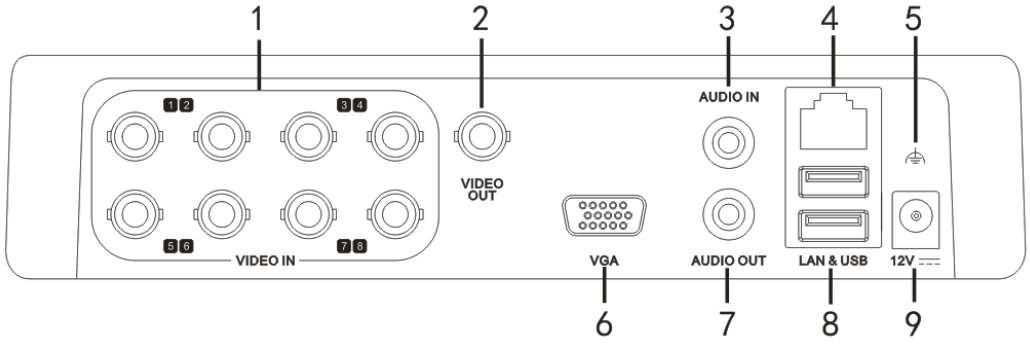


Figure 1.3 Rear Panel of DS-7108HWI-SL

Note: The DS-7104HWI-SL provides 4 video input interfaces and the DS-7116HWI/HVI-SL provides 16 video input interfaces on the rear panel.

Table 1.4 Description of Rear Panel

No.	Item	Description
1	**VIDEO IN**	BNC connector for analog video input.
2	**VIDEO OUT**	BNC connector for video output.
3	**AUDIO IN**	RCA connector for audio input.
4	**LAN Interface**	RJ45 10M / 100M Ethernet interface.
5	**GND**	Ground (needs to be connected when DVR starts up)
6	**VGA**	DB15 connector for VGA output. Display local video output and menu.
7	**AUDIO OUT**	RCA connector for audio output.
8	**USB Interface**	Connects USB mouse or USB flash memory devices.
9	**12V**	12VDC power supply.

1.5 Starting Up and Shutting Down the Device

Purpose:

Proper startup and shutdown procedures are crucial to expanding the life of the device.

Before you start:

Check that the voltage of the extra power supply is the same with the device's requirement, and the ground connection is working properly.

Starting up the device:

Check the power supply is plugged into an electrical outlet. It is HIGHLY recommended that an Uninterruptible Power Supply (UPS) be used in conjunction with the device. The Power indicator LED should turn red indicating that the unit begins to start up.

Shutting down the device:

Steps:

1. Enter the Shutdown menu.
   Menu > Shutdown

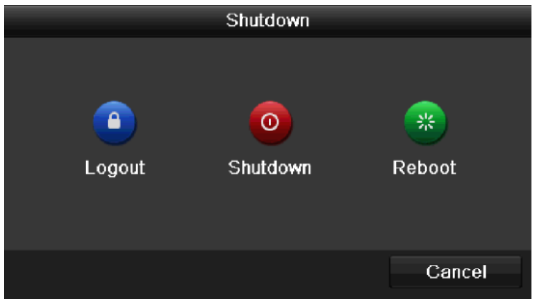


Figure 1.4 Shutdown Menu

2. Click the **Shutdown** button to enter the following dialog box:

Figure 1.5 Dialog Box for Shutdown

3. Click the **Yes** button. The following message box pops up:

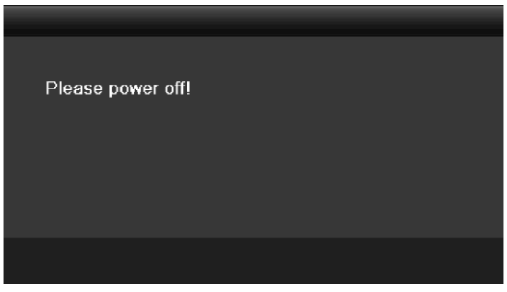


Figure 1.6 Message Box for Power Off

4. Disconnect the power supply of the device.

Rebooting the device

In the Shutdown menu (Figure 1.4), you can also click **Reboot** to reboot the device.

C H A P T E R 2

Getting Started

The Setup Wizard can walk you through some important settings of the device. By default, the Setup Wizard starts once the device has loaded.

Operating the Setup Wizard:

Steps:

1. Select the system resolution from the drop-down menu. The default resolution is 1280×1024/60Hz.

Click **Apply** to save the resolution settings.

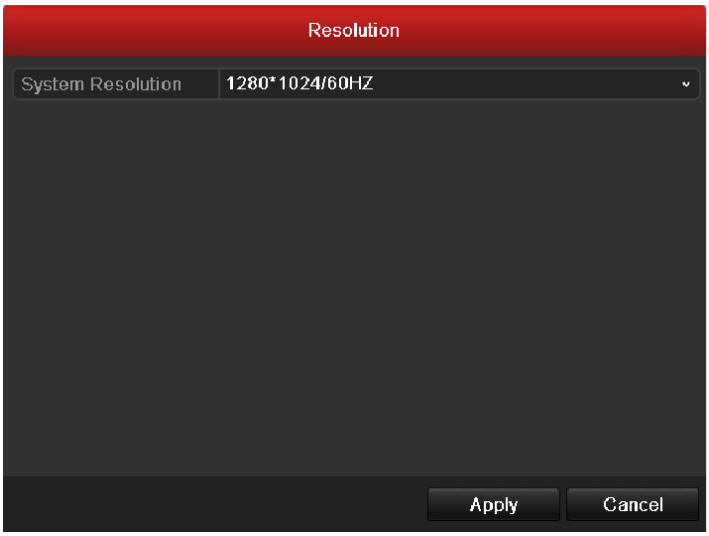


Figure 2.1 Start Wizard Interface

2. Check the checkbox to enable Setup Wizard when device starts. Click **Next** to continue the setup wizard.

You can also click **Cancel** to exit the Setup Wizard, or use the Setup Wizard next time by leaving the "Start wizard when device starts?" checkbox checked and exit.

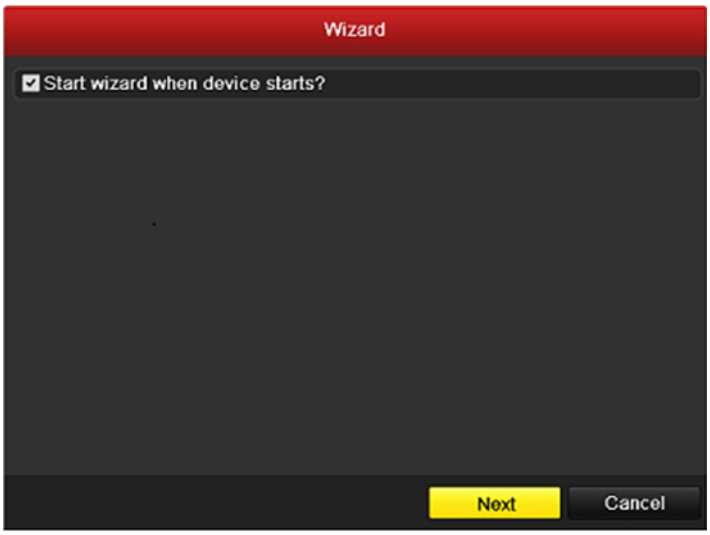


Figure 2.2 Start Wizard Interface

3. Click **Next** button on the Wizard window to enter the **Login** window, as shown in Figure 2.3.

1) Enter the admin password. By default, the password is 12345.
2) To change the admin password, check the **New Admin Password** checkbox. Enter the new password and confirm the password in the given fields.

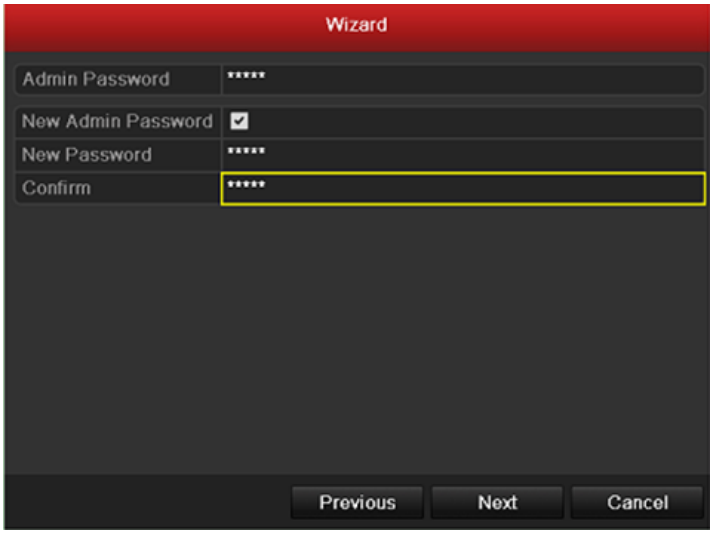


Figure 2.3 Login Window

4. Click the **Next** button to enter the **Date and Time** settings window, as shown in Figure 2.4.
   Set the time zone, date format, system date and system time.

Figure 2.4 Date and Time Settings

5. Click **Next** button which takes you back to the **Network** Setup Wizard window, as shown in Figure 2.5. Set the network parameters, including the NIC type, IPv4 address, IPv4 subnet mask, default gateway, etc. You can enable the DHCP to automatically obtain an IP address and other network settings from that server.

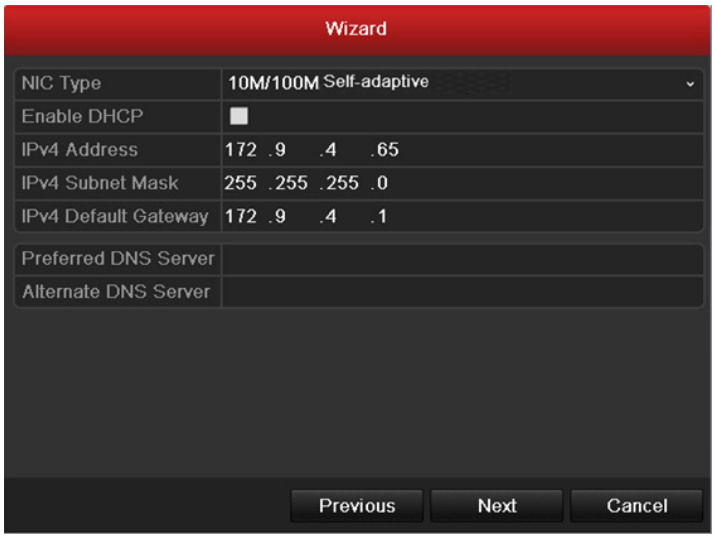


Figure 2.5 Network Configuration

6. Click **Next** button to enter the **HDD Management** window, shown in Figure 2.6.

To initialize the HDD, click the **Init** button. Initialization removes all the data saved in the HDD.

Figure 2.6 HDD Management

7. Click **Next** button to enter the **Record Settings** window, as shown in Figure 2.7.

1) Select the camera to configure.
2) Check the checkbox to enable **Start Recording**.
3) Select the recording mode to Normal or Motion Detection.

Figure 2.7 Record Settings

4) Click **Copy** to copy the record settings of the current camera to other camera (s) if needed, as shown in Figure 2.8.

Figure 2.8 Copy Record Settings

5) Click **OK** to return to the **Record Settings** window.

8. Click **OK** to complete the startup Setup Wizard.

C H A P T E R 3

Live View

3.1 Introduction of Live View

Live view shows you the video image getting from each camera in real time. The device automatically enters Live View mode when powered on. It is also at the very top of the menu hierarchy, thus pressing the ESC many times (depending on which menu you're on) brings you to the Live View mode.

Live View Icons

In the live view mode, there are icons at the right top of the screen for each channel, showing the status of the record and alarm in the channel, so that you can know whether the channel is recorded, or whether there are alarms occur as soon as possible.

Table 3.1 Description of Live View Icons

Icons	Description
	Alarm (video loss, tampering or motion detection alarm)
	Record (manual record, schedule record or motion detection record)
	Alarm & Record

3.2 Operations in Live View Mode

In live view mode, the following functions can be realized:

- **Single Screen**: showing only one screen on the monitor.
- **Multi-screen:** showing multiple screens on the monitor simultaneously.
- **Auto-switch:** the screen is auto switched to the next one. And you must set the dwell time for each screen on the configuration menu before enabling the auto-switch.
  Menu>Configuration>Live View>Dwell Time.
- **All-day Playback**: play back the recorded videos for current day.
- **Start Recording**: start all-day normal recording or motion detection recording for all channels.
- **Aux/Main Monitor switch:** the DVR will check the connection of the output interfaces to define the main and auxiliary output interfaces. When both VGA and CVBS are connected, the DVR detects the VGA as the main video output (live view, playback and men operations) and the CVBS as the auxiliary video output (live view and recording).

When the aux output is enabled, you can do some basic operation on the live view mode for the Aux output, while no operation is allowed for the main output.

3.2.1 Using the Mouse in Live View

In the live view mode, use the mouse to right-click on the window to access the following menu:

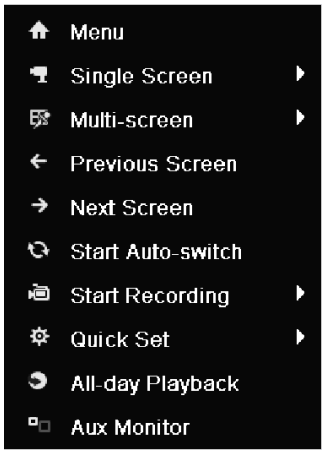


Figure 3.1 Right-click Menu

Table 3.2 Mouse Operation in Live View

Name	Description
Menu	Enter the main menu of the system by right-clicking the mouse.
Single Screen	Switch to the single full screen by choosing channel number from the dropdown list.
Multi-screen	Adjust the screen layout by choosing from the dropdown list.
Previous Screen	Switch to the previous screen.
Next Screen	Switch to the next screen.
Start/Stop	Enable/disable the auto-switch of the screens.

Auto-switch	***Note:*** The *dwell time* of the live view configuration must be set before using **Start Auto-switch**.
Start Recording	Start all-day normal recording or motion detection recording for all channels.
Quick Set	Set the video output mode to Standard, Bright, Gentle or Vivid.
All-day Playback	Play back the video of the selected channel.
Aux Monitor	Switch to the auxiliary output mode and the operation for the main output is disabled. ***Note:*** If you enter Aux monitor mode and the Aux monitor is not connected, the mouse operation is disabled.

Note: If the corresponding camera supports intelligent function, the Reboot Intelligence option is included when right-clicking mouse on this camera.

3.2.2 Using an Auxiliary Monitor

Certain features of the Live View are also available while in an Aux monitor. These features include:

- **Single Screen:** Switch to the single full screen by choosing channel number from the dropdown list.
- **Multi-screen:** Adjust the screen layout by choosing from the dropdown list.
- **Previous Screen:** Switch to the previous screen.
- **Next Screen:** Switch to the next screen.
- **Quick Set:** Set the video output mode to Standard, Bright, Gentle or Vivid.
- **Menu Output Mode**: Select the menu output mode to VGA, Main CVBS or Auto.
- **Main Monitor:** Switch to the Main Output mode and the operation for the auxiliary output is disabled.

Note: In the live view mode of the main output monitor, the menu operation is not available while Aux output mode is enabled.

3.2.3 Main/Aux Output Switching

When the VGA output is configured as the main output, you can perform the following operation to switch to CVBS output as the main output.

Steps:

1. Use the mouse wheel to double-click on the VGA output screen, and the following message box pops up:

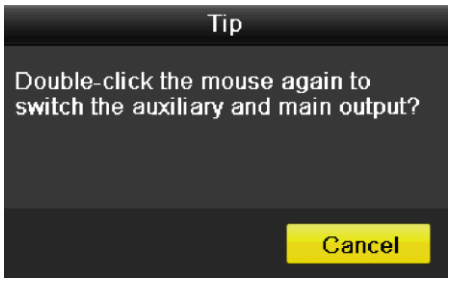


Figure 3.2 Switch Main and Aux Output

2. Use the mouse wheel to double-click on the screen again to switch to the Aux output, or click **Cancel** to cancel the operation.
3. Select the **Menu Output Mode** to **Main CVBS** from the right-click menu on the CVBS output monitor.

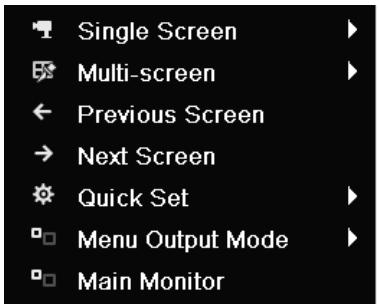


Figure 3.3 Right-click Menu on CVBS Output Monitor

4. On the pop-up message box, click **Yes** to restart the device to enable the CVBS output as the main output.

Note: You can select the Menu Output Mode under Menu>Configuration>More Settings to Auto or VGA and then restart the device to switch the main output back to VGA output.

3.2.4 Quick Setting Toolbar in Live View Mode

On the screen of each channel, there is a quick setting toolbar which shows when you right-click mouse on the camera.

Figure 3.4 Quick Settings Toolbar

Table 3.3 Description of Quick Setting Toolbar Icons

Icons	Description	Icons	Description	Icons	Description
	Enable Manual Record		Instant Playback		Mute/Audio on
	Digital Zoom		Image Settings		Close

Instant Playback

Instant Playback only shows the record in last five minutes. If no record is found, it means there is no record during the last five minutes.

Digital Zoom

Digital Zoom can zoom in the selected area to the full screen. You can left-click and draw to select the area for zooming in, as shown in Figure 3.5.

Figure 3.5 Digital Zoom

Image Settings

Image Settings icon can be selected to enter the Image Settings menu.

Steps:

1. Set the period of a day for configuring independent image parameters so as to satisfy different light conditions, e.g., daylight and night time. Two periods can be configured. When you have configured Period 1, the Period 2 is remained as the *Other Time*.
2. Select the mode from the drop-down menu according to different light conditions.
   Four modes are selectable:
   - **Standard**: in general lighting conditions (default).
   - **Indoor:** the image is relatively smoother.
   - **Dim Light:** the image is smoother than the other three modes.
   - **Outdoor:** the image is relatively clearer and sharper. The degree of contrast and saturation is high.

Figure 3.6 Image Settings

3. Adjust the image parameters including the brightness, contrast, saturation, hue, sharpness level and denoising level by moving the sliding bar or increasing/decreasing the value.

   Note: The adjustable value range is 0~255 for the brightness, contrast, saturation and hue, 0~15 for the

sharpness level and 0~5 for the denoising level.

4. Copy image parameters.

1) If you want to copy the image parameters of the current camera to other camera (s), click the **Copy** button to enter the **Copy to** interface:

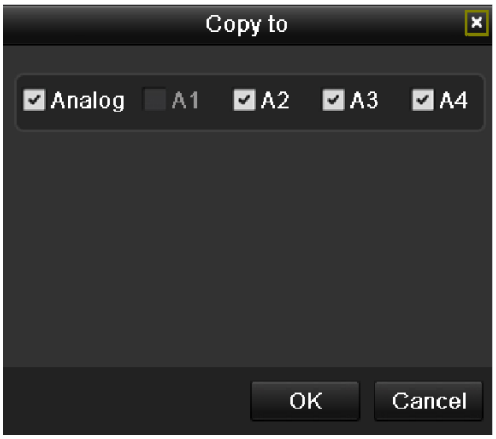


Figure 3.7 Copy Image Settings to Other Camera (s)

2) Select the camera (s) to be configured with the image settings. You can also click the checkbox of Analog to select all cameras.

3) Click the **OK** button to finish the Copy settings.

Note: You can click the **Restore** button to restore the current image settings to default parameters.

3.3 Adjusting Live View Settings

Purpose:

Live View settings can be customized according to different needs. You can configure the output interface, dwell time for screen to be shown, mute or turning on the audio, the screen number for each channel, etc.

Steps:

1. Enter the Live View Settings interface.

   Menu> Configuration> Live View

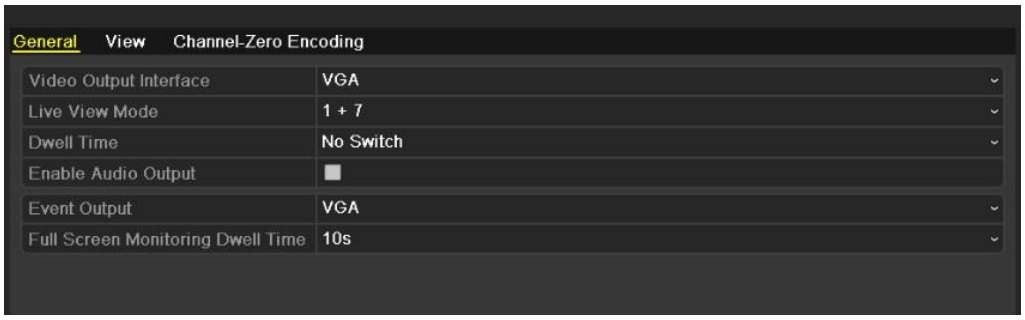


Figure 3.8 Live View-General

The settings available in this menu include:

- **Video Output Interface:** Select the output to configure the settings for. Two output interfaces are selectable: VGA and Main CVBS.
- **Live View Mode:** Select different window-division mode from the drop-down list.
- **Dwell Time:** The time in seconds to *dwell* between switching of channels when enabling auto-switch in Live View.
- **Enable Audio Output:** Enable/disable audio output for the selected video output.

  Notes:

  1. When the VGA output interface is used as the main video output and the **Audio Output** for the VGA output interface is enabled, the VGA audio and AUDIO OUT can be used for live view, playback and two-way audio.
  2. When the VGA output is used as the main video output and the **Audio Output** for the VGA output interface is disabled, the VGA output provides no audio and the AUDIO OUT is used for two-way audio.
  3. When the CVBS output is used as the main video output, the VGA audio is provided for Aux video output in live view, and the AUDIO OUT is used as the main video output (for live view, playback or two-way audio).
- **Event Output:** Select the output to show event video.
- **Full Screen Monitoring Dwell Time:** The time in seconds to show alarm event screen.

2. Setting Camera Order

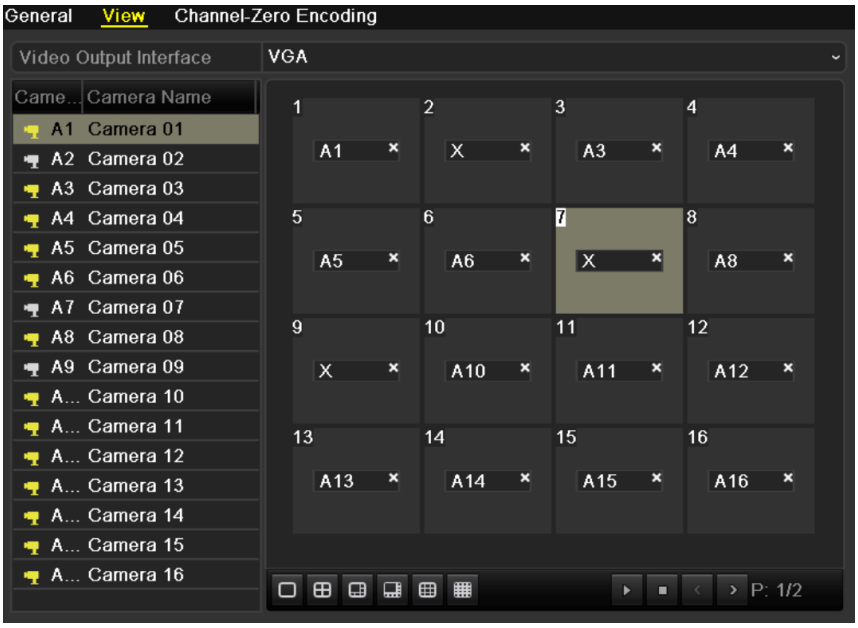


Figure 3.9 Live View- Camera Order

To set the camera order:

1) Click the **View** tab to enter the camera order settings interface.
2) Select an output interface and select a screen layout.
3) Click to select a screen in the right region and double-click to select a channel in the left region. Thus the selected channel will be displayed in the corresponding screen.

   Note: X means the channel will not be displayed.
4) You can click ▶ to start live view of all channels and click ■ to stop live view of all channels. Click ‹ or › to go to the previous or next page.
5) Click the **Apply** button to save the setting.

3.4 Channel-zero Encoding

Purpose:

Sometimes you need to get a remote view of many channels in real time from web browser or CMS (Client Management System) software, in order to decrease the bandwidth requirement without affecting the image quality, channel-zero encoding is supported as an option for you.

Steps:

1. Enter the **Live View** Settings interface.
   Menu> Configuration> Live View
2. Select the **Channel-Zero Encoding** tab.

Figure 3.10 Live View- Channel-Zero Encoding

3. Check the checkbox after **Enable Channel-Zero Encoding.**
4. Configure the Frame Rate, Max. Bitrate Mode and Max. Bitrate.

After you set the Channel-Zero encoding, you can get a view in the remote client or Web browser of all the channels in one screen.

3.5 User Logout

Purpose:

After logging out, the monitor turns to the live view mode and if you want to do some operation, you need to enter user name and password to log in again.

Steps:

1. Enter the Shutdown menu.

   Menu>Shutdown

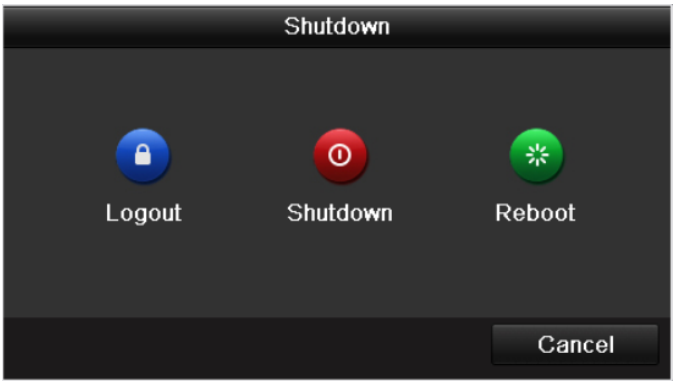


Figure 3.11 Shutdown

2. Click **Logout**.

   Note: After you have logged out the system, menu operation on the screen is invalid. It is required a user name and password to login the system.

C H A P T E R 4

Record Settings

4.1 Configuring Encoding Parameters

Purpose:

By configuring the encoding parameters you can define the transmission stream type, the resolution and so on.

Before you start:

1. Make sure that the HDD has already been installed. If not, please install a HDD and initialize it. (Menu>HDD>General)

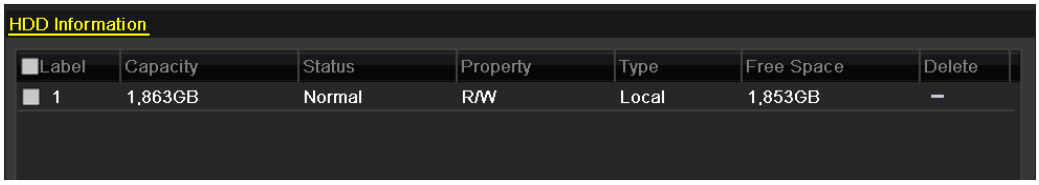


Figure 4.1 HDD- General

2. Check the storage mode of the HDD
   1) Click **Advanced** to check the storage mode of the HDD.
   2) For *Quota* storage mode, please set the maximum record capacity. For detailed information, see *Chapter 9.2 Configuring Quota Mode*.

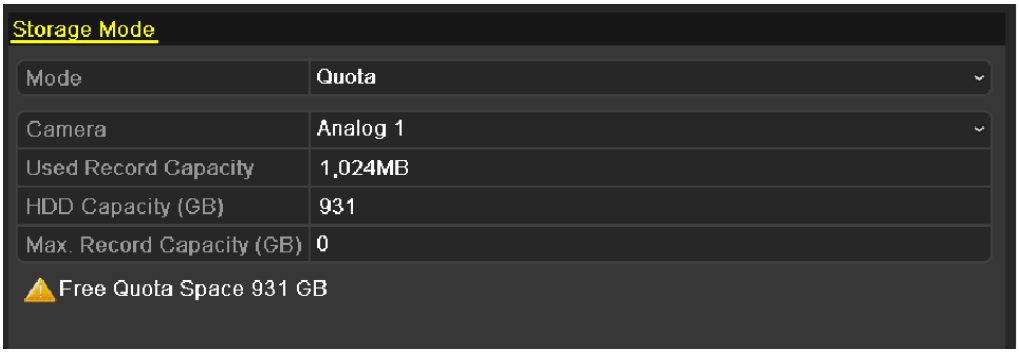


Figure 4.2 HDD- Advanced

Steps:

1. Enter the Record settings interface to configure the encoding parameters:
   Menu>Record>Encoding

Figure 4.3 Encoding Parameters-Main Stream

2. Set encoding parameters for main stream

1) Select **Record** to enter the main stream settings interface.
2) Select the camera for configuration.
3) Configure the following parameters for the Main Stream (Normal) and the Main Stream (Event):
   - **Stream Type:** Set the stream type to be Video or Video & Audio.
   - **Resolution:** Set recording at resolution of WD1, 4CIF, 2CIF, CIF or QCIF.
   - **Bitrate Type:** Set the bitrate type to be Variable or Constant.
   - **Video Quality:** Set the video quality of recording, with 6 levels configurable.
   - **Frame Rate:** Set the frame rate of recording.
   - **Max. Bitrate Mode:** Set the mode to General or Customize (32-3072Kbps).
   - **Max Bitrate (Kbps):** Select or customize the maximum bit rate for recording.
   - **Max. Bitrate Range Recommended:** A recommended Max. bitrate range is provided for reference.
4) Configure the pre-record, post-record time and expired time.
   - **Pre-record:** The time you set to record before the scheduled time or event. For example, when an alarm triggered the recording at 10:00, if you set the pre-record time as 5 seconds, the camera records it at 9:59:55.
   - **Post-record:** The time you set to record after the event or the scheduled time. For example, when an alarm triggered the recording ends at 11:00, if you set the post-record time as 5 seconds, it records till 11:00:05.
   - **Expired Time (day):** The expired time is the longest time for a record file to be kept in the HDD, if the deadline is reached, the file will be deleted. You can set the expired time to 0, and then the file will not be deleted. The actual keeping time for the file should be determined by the capacity of the HDD.

- **Record Audio:** Check the checkbox to record the sound, or uncheck to record the image without sound.
- **Enable 960Mode:** Enable the encoding at WD1 (PAL: 960×576, NTSC: 960×480) resolution. You can also uncheck the checkbox to disable it.

5) If you want to copy the current main stream settings to other camera (s), click **Copy** to enter the Copy Camera interface. Select the camera (s) and click **OK** to finish the copy settings.

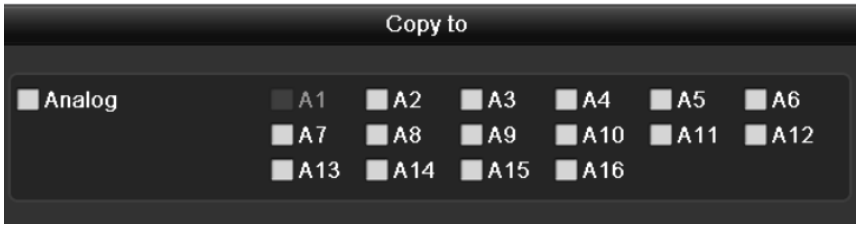


Figure 4.4 Copy Camera Settings

6) On the Record settings interface, click **Apply** to save the settings.

Note: You can click the **Restore** button to restore the current main stream settings to the default parameters.

3. Set encoding parameters for sub-stream

1) Click the **Substream** tab to enter the Substream settings interface.

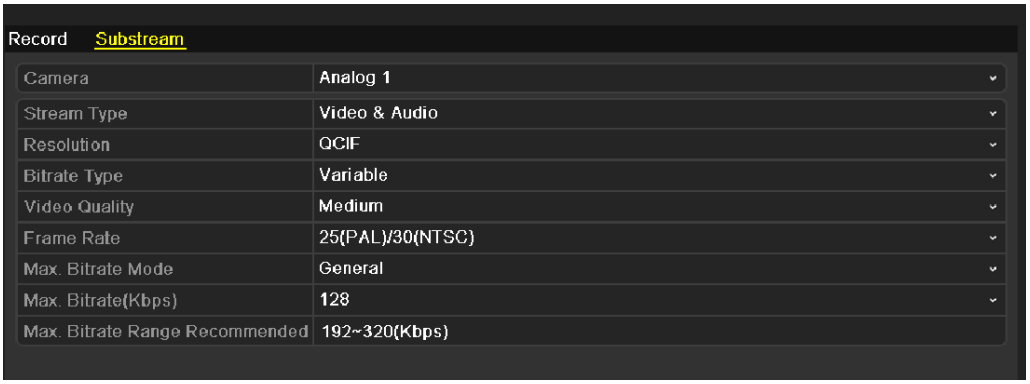


Figure 4.5 Encoding Parameters-Sub-stream

2) Configure the parameters for the sub-stream. Refer to the steps of main stream settings.

3) Click **Apply** to save the settings.

Note: You can click the **Restore** button to restore the current sub-stream settings to the default parameters.

4) If you want to copy the current sub-stream settings to other camera (s), click **Copy** to enter the Copy Camera interface. Select the camera (s) and click **OK** to finish the copy settings.

4.2 Configuring Record Schedule

Purpose:

Set the record schedule, and then the camera automatically starts/stops recording according to the configured schedule.

Steps:

1. Enter the Record Schedule interface.

Menu>Record>Schedule

2. Configure Record Schedule

1) Click **Schedule** to enter the record schedule settings interface.

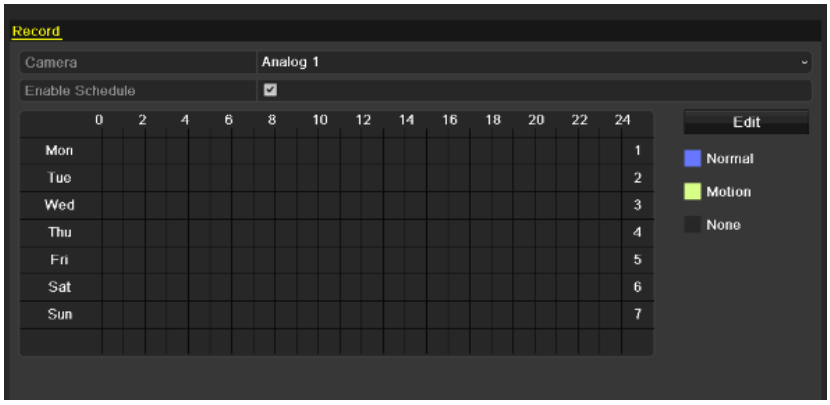


Figure 4.6 Record Schedule

2) Choose the camera you want to configure.

3) Check the check box after the **Enable Schedule** item.

There are two ways to configure the record schedule.

Task 1: Edit the Schedule

Steps:

1) Click **Edit**.

2) In the message box, you can choose the day which you want to set schedule.

3) To schedule an all-day recording, check ☑ checkbox to enable all-day recording.

4) Set the Type in the dropdown list, including Normal and Motion.

Note: To enable Motion triggered recording, you must configure the motion detection settings as well. For detailed information, refer to *Chapter 7.1*.

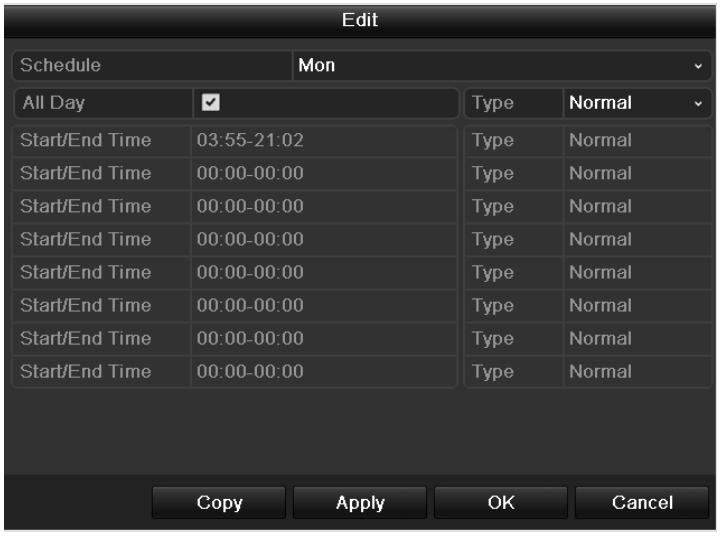


Figure 4.7 Edit Schedule

5) To arrange other schedule, leave the **All Day** checkbox blank and set the Start/End time and Type.

Note: Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other.

Repeat the above steps 2)-5) to schedule recording for other days in the week. If the schedule can also be set to other days, click **Copy**.

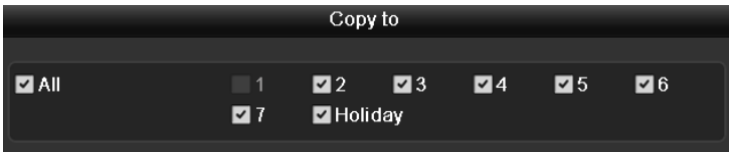


Figure 4.8 Copy Schedule to Other Days

Note: The **Holiday** option is available in the Schedule dropdown list when you have enabled holiday schedule in **Holiday Settings**. Refer to C*hapter 4.5 Configuring Holiday Record.*

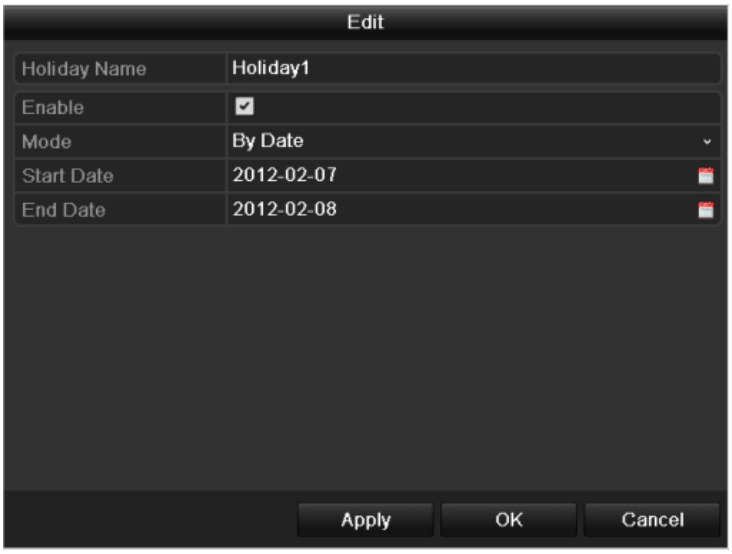


Figure 4.9 Holiday Settings

6) Click **OK** to save setting and back to upper level menu.

Task 2: Draw the Schedule

Steps:

1) Click the icon on the right to select a record type, including Normal, Motion and None.

   Note: To enable Motion triggered recording, you must configure the motion detection settings. For detailed information, refer to *Chapter 7.1*.

2) Use the mouse to drag and draw time periods.

   Note: Up to 8 periods can be configured for each day.

Figure 4.10 Draw the Schedule

3) You can repeat the above steps to set schedule for other channels. If the settings can also be used to

other channels, click **Copy** to enter the Copy Camera interface and then choose the channel to which you want to copy.

Figure 4.11 Copy Schedule to Other Channels

4) Click **Apply** in the Record Schedule interface to save the settings.

4.3 Configuring Motion Detection Record

Purpose:

Follow the steps to set the motion detection parameters. In the live view mode, once a motion detection event takes place, the device can analyze it and perform some response actions to handle it. Enabling motion detection function can trigger certain channels to start recording, or trigger full screen monitoring, audio warning, notify the surveillance center and so on. In this chapter, you can follow the steps to schedule a record which triggered by the detected motion.

Steps:

1. Enter the Motion Detection interface.

   Menu>Camera>Motion

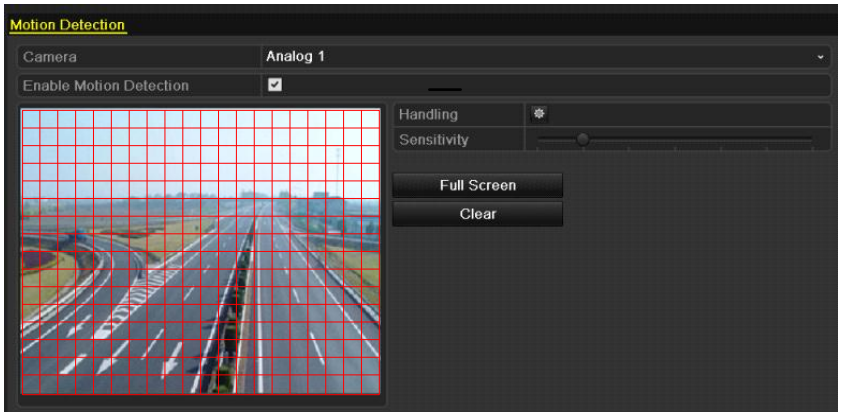


Figure 4.12 Motion Detection

2. Configure Motion Detection:
   1) Choose camera you want to configure.
   2) Check the checkbox after **Enable Motion Detection**.
   3) Drag and draw the area for motion detection by mouse. If you want to set the motion detection for all the area shot by the camera, click **Full Screen**. To clear the motion detection area, click **Clear**.

      Note: By default, the motion detection is configured in full screen.

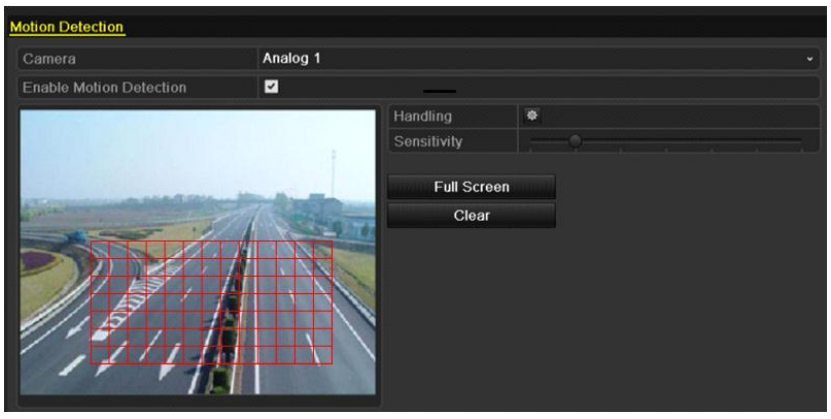


Figure 4.13 Motion Detection- Mask

4) Click **Handling**, and the message box for channel information will pop up.

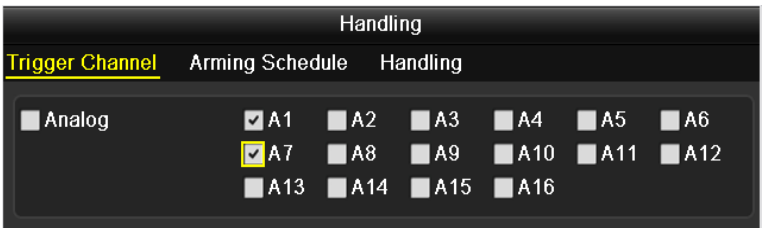


Figure 4.14 Motion Detection Handling

5) Select the channels which you want the motion detection event to trigger recording.
6) Click **Apply** to save the settings.
7) Click OK to back to the upper level menu.
8) Exit the Motion Detection menu.

3. Enter Schedule settings interface.

Menu> Record> Schedule>Record

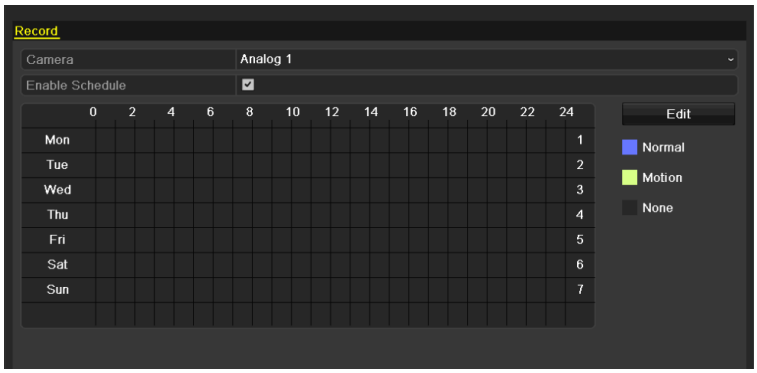


Figure 4.15 Record Schedule

1) Check the checkbox after the **Enable Schedule** item.
2) Click **Edit**.

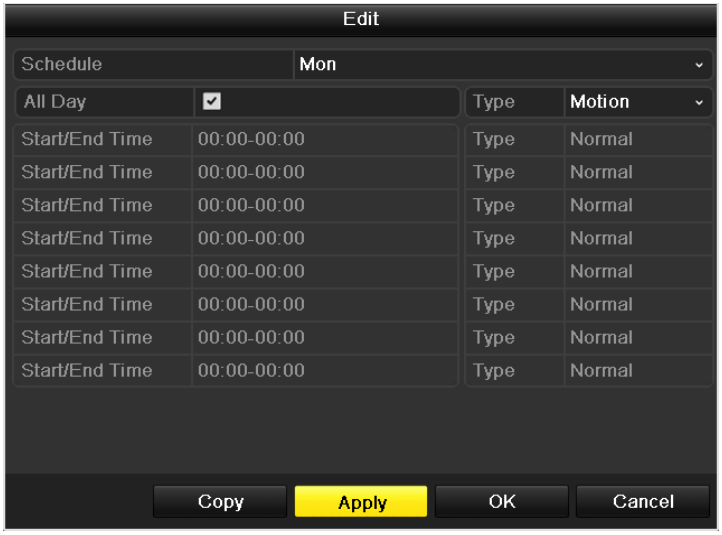


Figure 4.16 Edit Schedule- Motion Detection

3) In the message box, you can choose the day to which you want to set schedule.

4) Set the **Type** as **Motion**.

5) To schedule an all-day recording, check the checkbox after the **All Day** item.

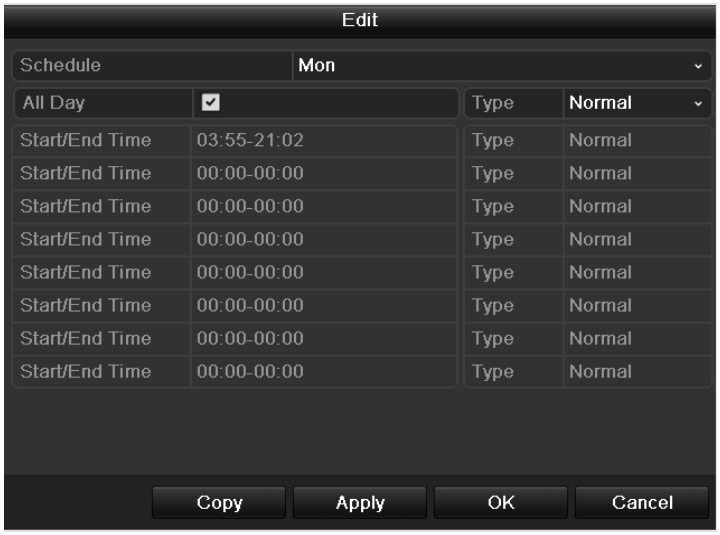


Figure 4.17 Edit Schedule- All Day

6) To arrange other schedule, leave the **All Day** checkbox blank and set the Start/End time.

Note: Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other.

Repeat the above steps3)-6) to schedule motion detection triggered recording for all the week. If the schedule can also be set to other days, click **Copy**.

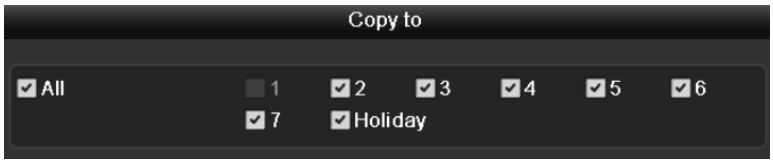


Figure 4.18 Copy Schedule to Other Days

7) Click **OK** to back to upper level menu.

If you can to copy the same schedule settings to other camera (s), click **Copy** to enter the Copy Camera interface, and then select the camera (s) you want to copy.

Figure 4.19 Copy Schedule to Other Channels

4.4 Configuring Manual Record

Purpose:

Follow the steps to set parameters for the manual record. When using manual record, you need to manually cancel the record. The manual recording is prior to the scheduled recording.

Steps:

1. Enter the Manual settings interface.

   Menu> Manual

Figure 4.20 Manual Record

2. Enable recording for camera (s).

   Click the status button beside each camera number to change OFF to ON, or you can enable recording for all cameras by clicking the status bar before **Analog** to change it to ON.

3. Set recording mode to manual.

   By default, the camera is enabled with recording by schedule (ON). Click the ON status bar to change it to OFF and click again to enable the recording to manual (ON).

   ON: recording by schedule.

   ON: recording by manual operation.

   Note: After rebooting, all the manual records enabled are canceled.

4. Start all-day normal recording or all-day motion detection recording of all channels.

   1) Click ⚙ for Normal or Motion Detection.

Figure 4.21 Start Normal or Motion Detection Recording

   2) Click **Yes** to enable all-day normal recording or all-day motion detection recording of all channels.

4.5 Configuring Holiday Record

Purpose:

You may want to have different plan for recording on holiday. Follow the steps to configure the record schedule on holiday.

Steps:

1. Enter the Record setting interface.

   Menu>Record

2. Choose **Holiday** on the left bar.

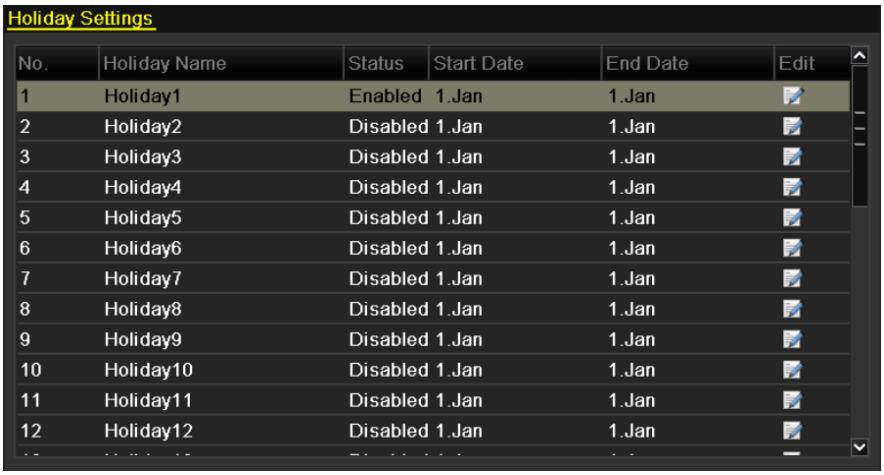


Figure 4.22 Holiday Settings

3. Enable Edit Holiday schedule.

1) Click to enter the Edit interface.

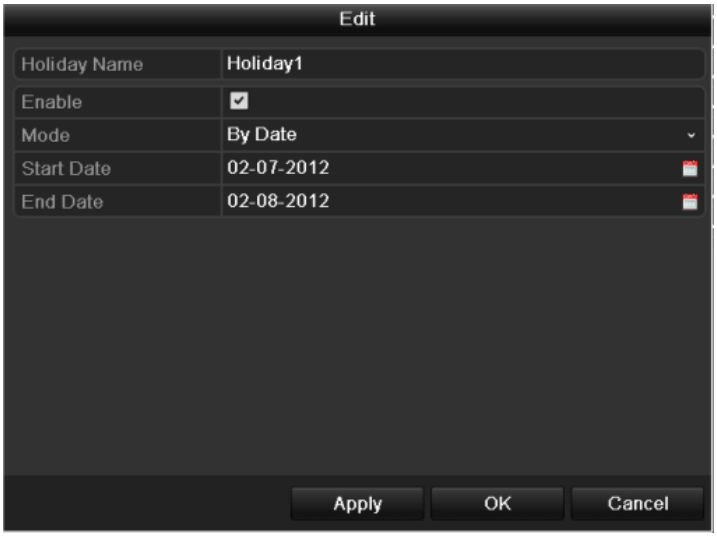


Figure 4.23 Edit Holiday Settings

2) Check the checkbox after **Enable**.

3) Select Mode from the dropdown list.

There are three different modes for the date format to configure holiday schedule.

4) Set the start and end date.

5) Click **Apply** to save settings.

6) Click **OK** to exit the Edit interface.

4. Enter Record Schedule settings interface.

Menu> Record> Schedule

1) Select **Record.**

2) Check the checkbox after **Enable Schedule**.

3) Click **Edit.**

4) Select **Holiday** from the **Schedule** dropdown list.

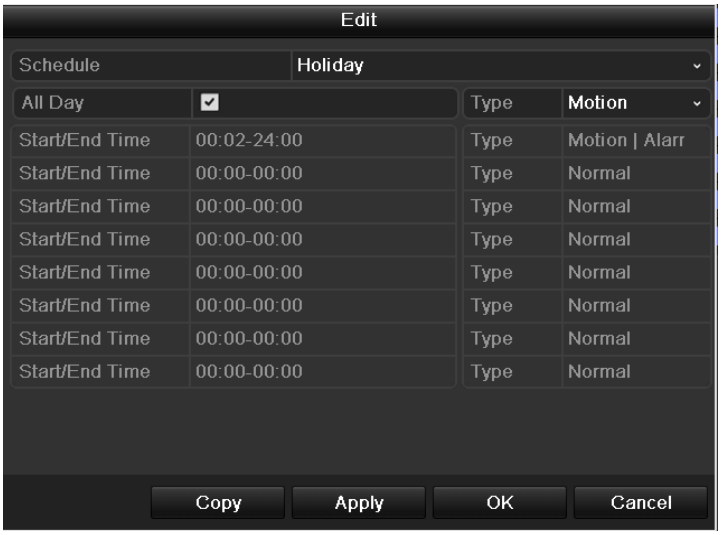


Figure 4.24 Edit Schedule- Holiday

5) Select **Motion** or **Normal** from the **Type** dropdown list.
6) If you need all day recording, check the **All Day** checkbox. Otherwise leave it blank.
7) Set start/end time for holiday schedule.

Note: Up to 8 periods can be configured for each day. And the time periods can't be overlapped each other.

In the time table of the channel, both holiday schedule and normal day schedule are displayed.

Repeat the above steps4)-7) to set Holiday schedule for other channel. If the holiday schedule can also be used to other channels, click **Copy** and choose the channel you want to apply the settings.

4.6 Files Protection

Purpose:

You can lock the recorded files or set the HDD property to Read-only to protect the record files from being overwritten.

Protect file by locking the record files:

Steps:

1. Enter Playback setting interface.

   Menu> Playback

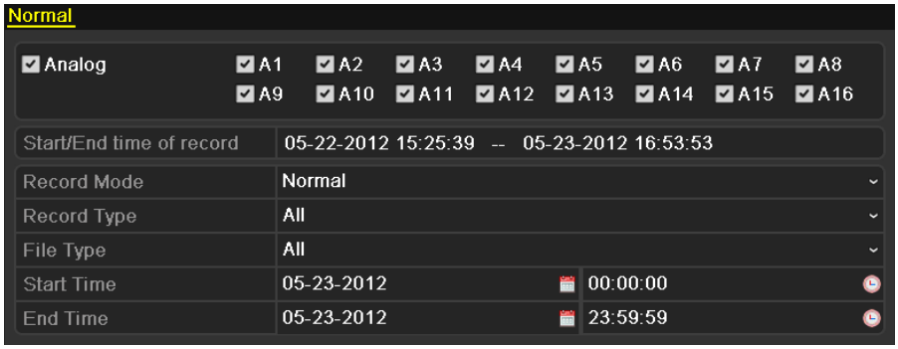


Figure 4.25 Playback

2. Select the channels by checking the checkbox to .
3. Configure the record type, file type and start/end time.
4. Click **Search** to show the results.

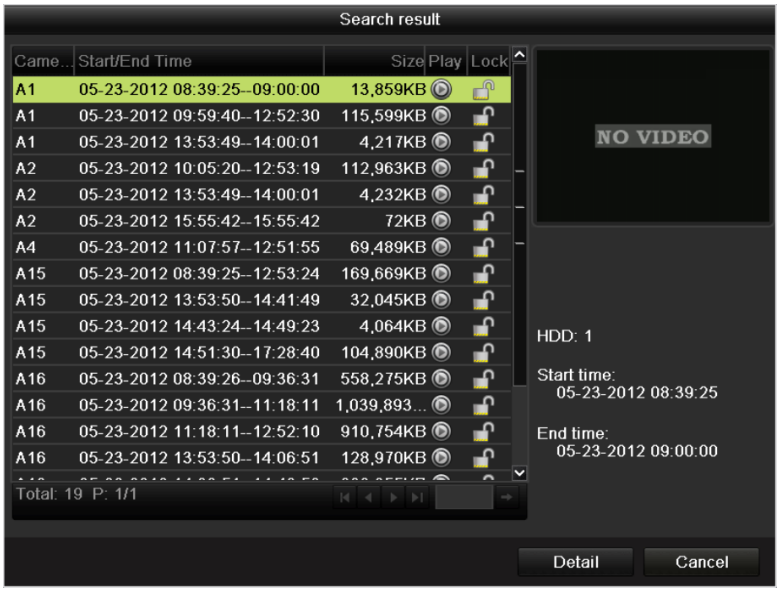


Figure 4.26 Playback- Search Result

5. Protect the record files.

   1) Find the record files you want to protect, and then click the icon which will turn to , indicating that the file is locked.

Note: The record files of which the recording is still not completed can't be locked.

2) Click to change it to to unlock the file and the file is not protected.

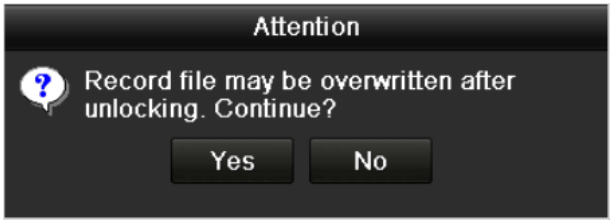


Figure 4.27 Unlocking Attention

C H A P T E R 5

Playback

5.1 Playing Back Record Files

5.1.1 Playing Back by Channel

Purpose:

Play back the recorded video files of a specific channel in the live view mode. Channel switch is supported.

Instant playback by channel:

Steps:

Choose a channel in live view mode using the mouse and click the button in the quick setting toolbar.

Note: Only record files recorded during the last five minutes on this channel will be played back.

Figure 5.1 Instant Playback Interface

All-day Playback by channel

1. Enter the All-day Playback interface.

   Right click a channel in live view mode and select All-day Playback from the menu, as shown in Figure 5.2.

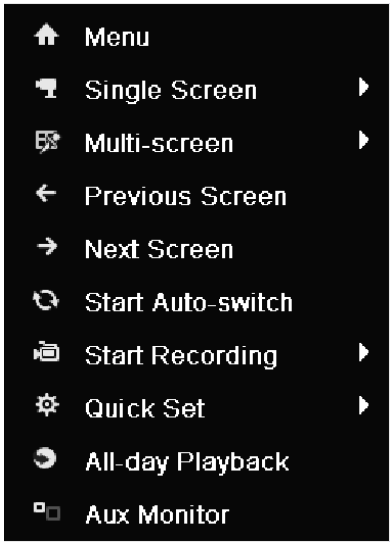


Figure 5.2 Right-click Menu under Live View

Under multi-screen live view, record files of the selected channel will be played back.

2. Playback management.

The toolbar in the bottom part of Playback interface can be used to control playing progress, as shown in Figure 5.3.

Figure 5.3 All-day Playback Interface

The channel and time selection menu displays by moving the mouse to the right of the playback interface. Click the channel(s) if you want to switch playback to another channel or execute simultaneous playback of multiple channels, as shown in Figure 5.4.

Figure 5.4 All-day Playback Interface with Channel List

Dates marked in different colors:

11 : No record files in this day.

9 : There is record file(s) in this day (not current day).

20 : There is only event recording file(s) in this day (not current day).

10 : Mouse cursor is located.

Figure 5.5 Toolbar of All-day Playback

Table 5.1 Detailed Explanation of All-day-playback Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on /Mute		Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Slow forward
	Pause reverse play/ Reverse play/ Single-frame reverse play		Pause play/ Play/ Single-frame play		Stop		Fast forward
	Previous day		Next day		Hide		Exit
	Process bar		Video type bar				

Notes:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.

2. About video type bar: represents normal recording (manual or schedule); represents event recording (motion); represents smart search recording.

5.1.2 Playing Back by Time

Purpose:

Play back video files recorded in specified time duration. Multi-channel simultaneous playback and channel switch are supported.

Steps:

1. Enter playback interface.
   Menu>Playback
2. Check the checkbox before the channel to select channel(s) and click the **Detail** button to view the record information of the channel(s). You can click **Previous** or **Next** to select the day for viewing the record information.

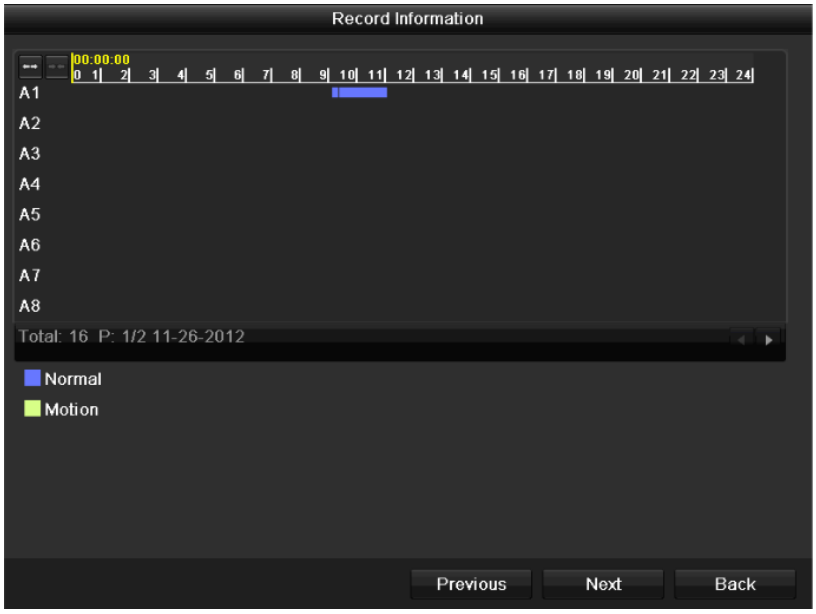


Figure 5.6 Record Information

3. Click **Back** to return to the playback interface.
4. Set search conditions and click the **Playback** button to enter Playback interface.

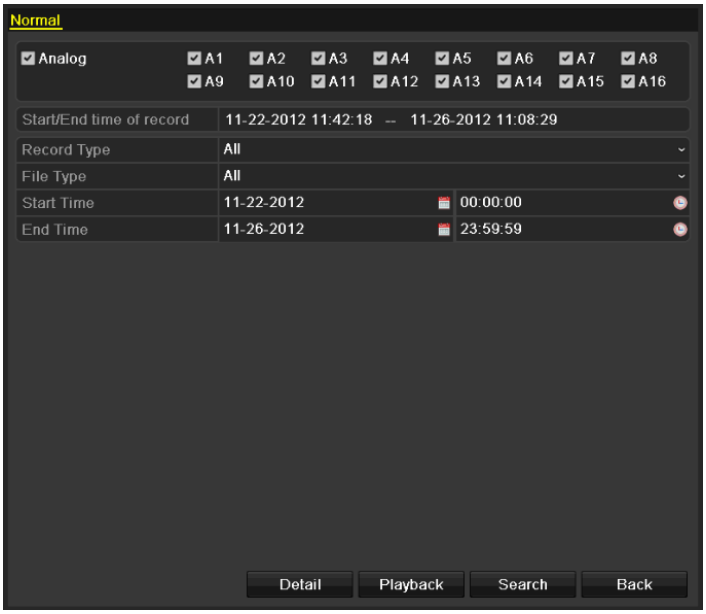


Figure 5.7 Video Search by Time

In the Playback interface:

The toolbar in the bottom part of Playback interface can be used to control playing process, as shown in Figure 5.9.

Figure 5.8 Interface of Playback by Time

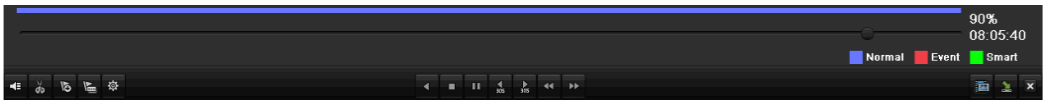


Figure 5.9 Toolbar of Playback by Time

Table 5.2 Detailed Explanation of Playback-by-time Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on/Mute		Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Slow forward
	Pause reverse play/Reverse play/ Single-frame reverse play		Pause play/Play/Single-frame play		Stop		Fast forward
	Video search		Exit		Hide		Progress bar
	Video type bar						

Notes:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: ■ represents normal recording (manual or schedule); ■ represents event recording (motion); ■ represents smart search recording.

5.1.3 Playing Back by Normal Video Search

Purpose:

Play back video files searched out by restricting recording type and recording time. The video files in the result list are played back sequentially and channel switch is supported. Recording types contain Normal, Motion and Manual.

Steps:

1. Enter Record File Search interface.

   Menu>Playback

   Set search condition and click **Search** button to enter the Search Result interface.

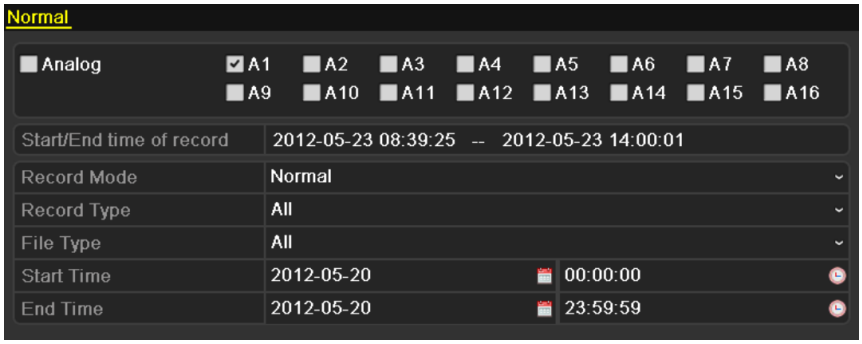


Figure 5.10 Normal Video Search

2. Choose a record file you want to play back.

If there is only one channel in the search result, clicking button takes you to Full-screen Playback interface of this channel.

If more than one channel is optional, clicking button takes you to step 3 and step 4.

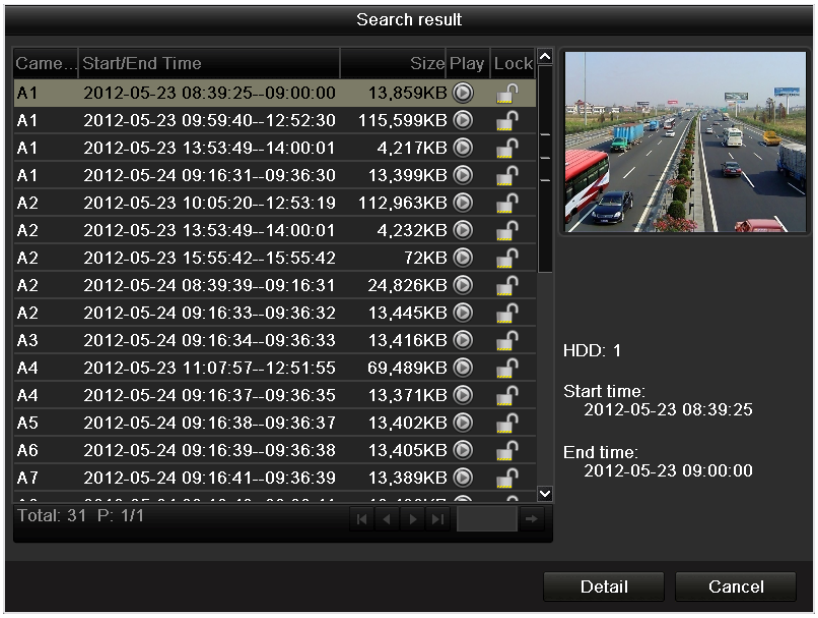


Figure 5.11 Result of Normal Video Search

3. Choose channels for simultaneous playback.

Note: Optional channels for simultaneous playback are the same as the channels chosen to search record files in step 1. And the channel with the recorded file selected in step 2 is the main channel during multi-channel playback and it is displayed at the upper left corner.

Figure 5.12 Select Channels for Synchronous Playback

4. Synchronous Playback interface.

The toolbar in the bottom part of Playback interface can be used to control playing process.

Figure 5.13 4-ch Synchronous Playback Interface

The hidden list of recorded files displays by moving the mouse to the right of the playback interface.

Figure 5.14 4-ch Synchronous Playback Interface with Video List

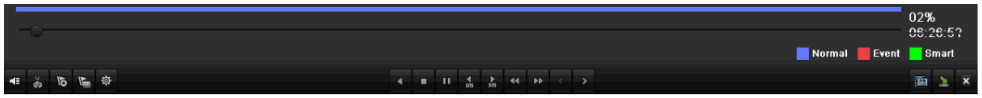


Figure 5.15 Toolbar of Normal Playback

Table 5.3 Detailed Explanation of Normal Playback Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on/Mute		Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Slow forward
	Pause reverse play/Reverse play/ Single-frame reverse		Pause play/Play/Single-frame play		Stop		Fast forward

	play						
	Previous file		Next file		Video search		Exit
	Hide toolbar		Progress bar		Video type bar		

Note:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: ■ represents normal recording (manual or schedule); ■ represents event recording (motion); ■ represents smart search recording.

5.1.4 Playing Back by Event Search

Purpose:

Play back record files on one or several channels searched out by restricting event type (motion detection). Channel switch is supported.

Steps:

1. Enter the playback interface.
   Menu>Playback
2. Select **Event** tab to enter the Event Playback interface.
3. Select **Motion** as the event type.
4. Set the start time and end time of the record files.
5. Select the camera (s) for searching.

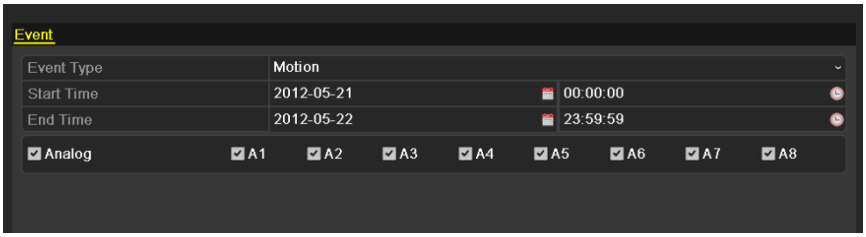


Figure 5.16 Video Search by Motion

6. Click **Search** button to enter the Search Result interface.
   The Pre-play and post-play can be configured. The **Pre-play** refers to the time configured before the defined start time of event search, and the **Post-play** refers to the time configured after the defined end time of event search. For example, when the start time and end time of event search are set to *12:00:00 - 13:00:00*, and the pre-play and post-play time is set to *30s* and *20s* respectively, then the actual playback of event video file is *11:59:30 ~ 13:00:20*.

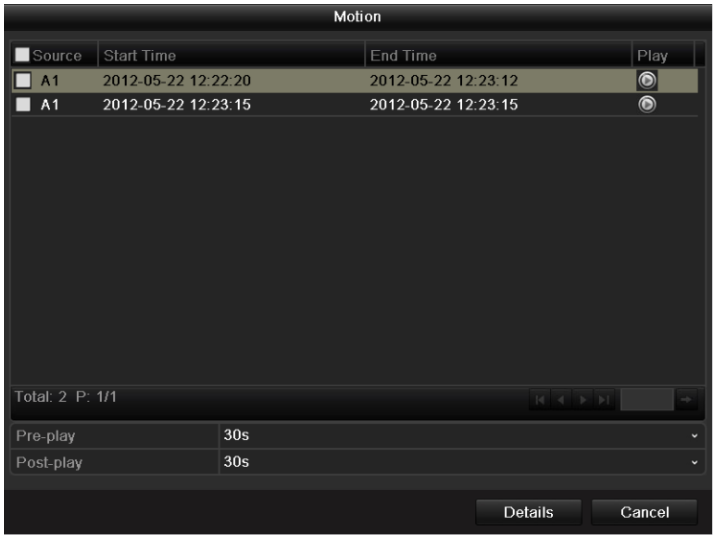


Figure 5.17 Video Search Result by Motion

7. You can select an item from the list and click **Details** to view detailed information of the record file, e.g., start time, end time, file size, etc.

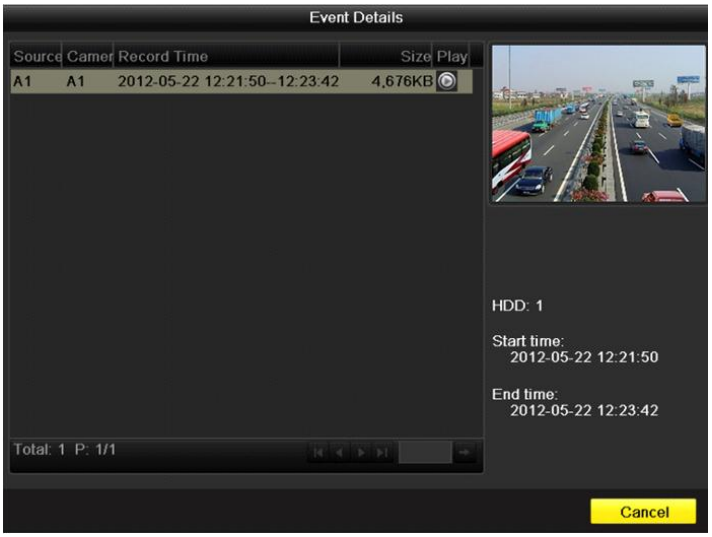


Figure 5.18 Event Details

8. Or you can directly click the button of each file item to enter its playback interface. The toolbar in the bottom part of Playback interface can be used to control playing process.

Figure 5.19 Interface of Playback by Event (1)

The hidden list of events will be displayed by moving the mouse to the right of the playback interface.

Figure 5.20 Interface of Playback by Event (2)

Figure 5.21 Toolbar of Playback by Event

Table 5.4 Detailed Explanation of Playback-by-event Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on/Mute		Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Slow forward

	Pause reverse play/Reverse play/ Single-frame reverse play		Pause play/Play/Single-frame play		Stop		Fast forward
	Previous event		Next event		Event search		Exit
	Hide		Progress bar		Video type bar		

Notes:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
3. About video type bar: ■ represents normal recording (manual or schedule); ■ represents event recording (motion); ■ represents smart search recording.

5.1.5 Playing Back by Tag

Purpose:

Video tag allows you to record related information like people and location of a certain time point during playback. You are also allowed to use video tag(s) to search for record files and position time point.

Before playing back by tag:

1. Enter Playback interface.

Figure 5.22 Interface of Playback by Event

Click button to add default tag.

Click button to add customized tag and input tag name.

Note: Max. 64 tags can be added to a single video file.

2. Tag management.

Click button to check, edit and delete tag(s).

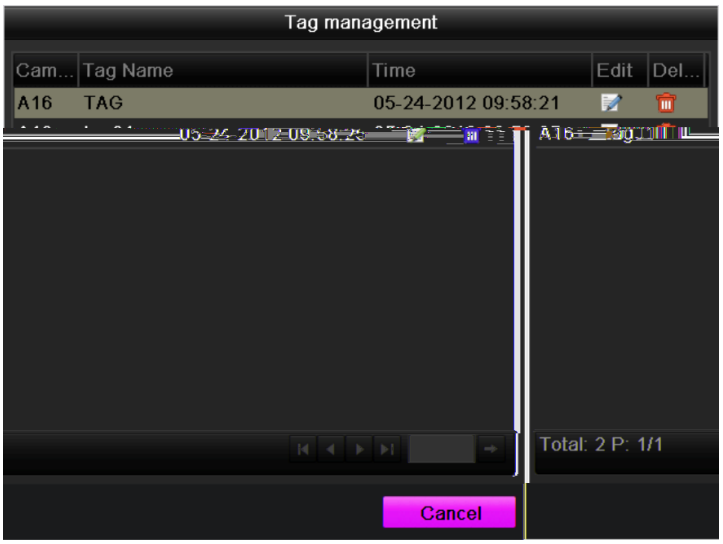


Figure 5.23 Tag Management Interface

To play back by tag:

Steps:

1. Enter Playback interface.

   Menu>Playback

   Click **Tag** tab to enter Playback by Tag interface.

   Choose channels, tag type and time, and click **Search** to enter Search Result interface.

   Note: Two tag types are selectable: *All* and *Tag Keyword*. Input keyword if you choose *Tag Keyword*.

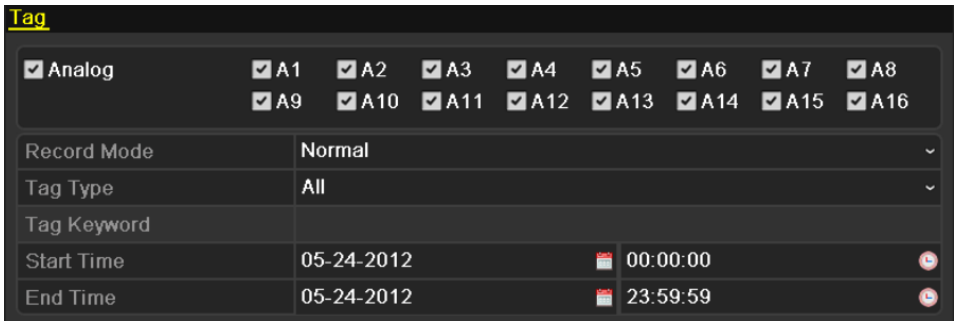


Figure 5.24 Video Search by Tag

2. Set playback conditions and tag management.

   Choose the tag name of the recorded file you want to play back; it can be edited or deleted.

   Pre-play and post-play time can be set according to actual needs.

   Note: Pre-play time and post-play time is added to the time point of the tag.

Figure 5.25 Result of Video Search by Tag

3. Playback by tag.

Choose a tag and click button to play back the related record file.

Figure 5.26 Interface of Playback by Tag

The hidden list of tags will be displayed by moving the mouse to the right of the playback interface.

Figure 5.27 Interface of Playback by Tag with Video List

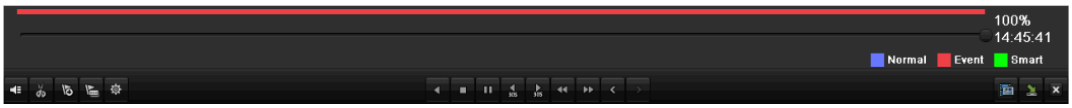


Figure 5.28 Toolbar of Playback by Tag

Table 5.5 Detailed Explanation of Playback-by-tag Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on/Mute		Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Slow forward
	Pause reverse play/Reverse play/ Single-frame reverse play		Pause play/Play/Single-frame play		Stop		Fast forward
	Previous tag		Next tag		Tag search		Exit
	Hide		Progress bar		Video type bar		

Notes:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: represents normal recording (manual or schedule); represents event recording (motion); represents smart search recording.

5.1.6 Playing Back by System Log

Purpose:

Play back record file(s) associated with channels after searching system logs.

Steps:

1. Enter Log Search interface.

   Menu>Maintenance>Log Information

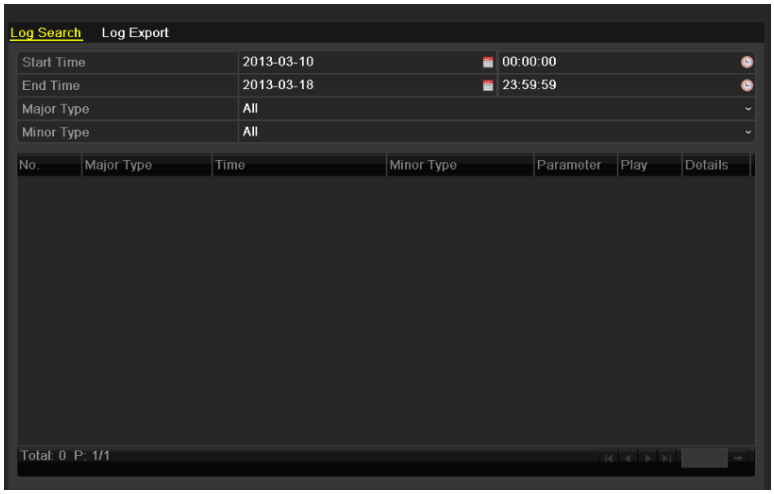


Figure 5.29 System Log Search Interface

2. Set search time and type and click **Search** button.

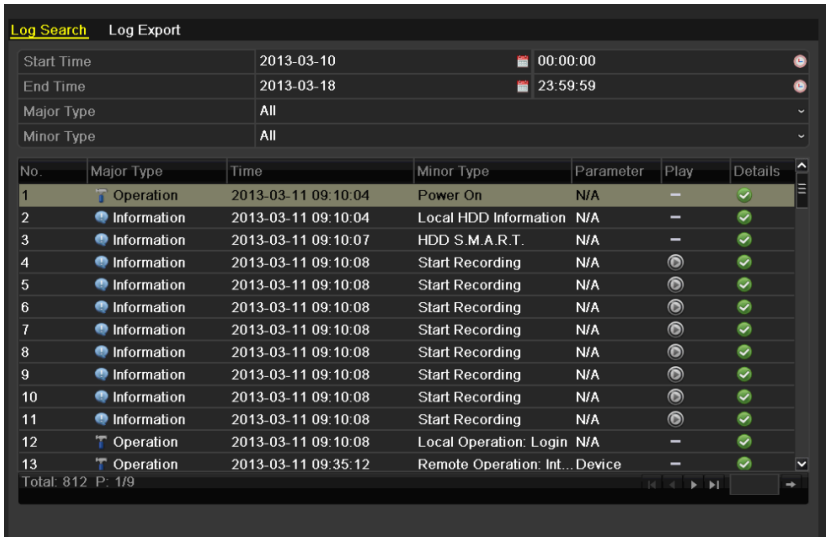


Figure 5.30 Result of System Log Search

3. Choose a log with record file and click button to enter Playback interface.

Note: If there is no record file at the time point of the log, the message box “No result found” will pop up.

The toolbar in the bottom part of Playback interface can be used to control playing process.

Figure 5.31 Interface of Playback by Log

5.2 Auxiliary Functions of Playback

5.2.1 Playing Back Frame by Frame

Purpose:

Play video files frame by frame, in order to check image details of the video when abnormal events happen.

Steps:

Go to Playback interface. If you choose playback of the record file: click button and until the speed changes to *Single* frame and one click on the playback screen represents playback of one frame. If you choose adverse playback of the record file: click button and until the speed changes to *Single* frame and one click on the playback screen represents adverse playback of one frame. It is also feasible to use button in toolbar.

5.2.2 Smart Search

Purpose:

In order to locate motion detection event easily and accurately in the playback progress bar, you are allowed to analyze a certain area (scene) dynamically, and to get all of the related motion detection events that occurred in this area.

Steps:

1. Go to normal playback or all-day playback interface.

Note: The smart search function is available for single-channel playback only.

Figure 5.32 Playback Interface

2. Right-click mouse and select **Smart Search** to go to analysis area selection interface.

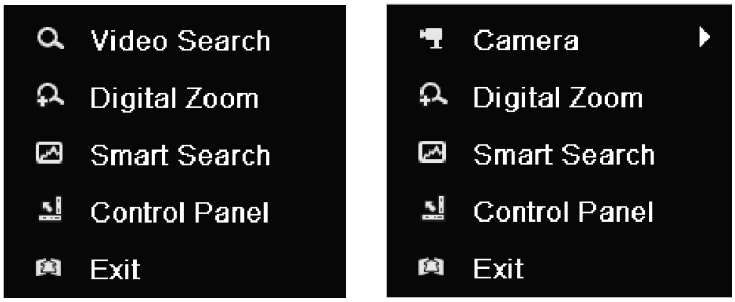


Figure 5.33 Right-click Menu in All-day Playback and Normal Playback Interface

3. You can click button to set the full screen as target searching area. After drawing area(s), click button to execute smart search in this area.

Note: Multi-area and full-screen searching modes are supported.

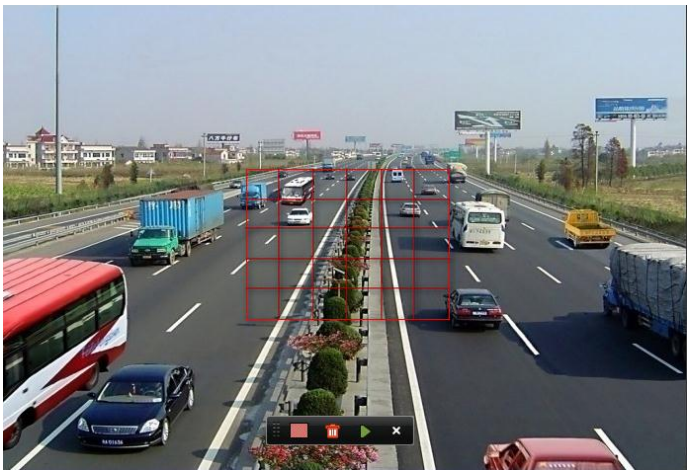


Figure 5.34 Draw Area of Smart Search

Results of intelligent analysis:

Video type bar:

: Normal record file;

: Event record file;

: Dynamic record file.

The hidden list of record files display when moving the mouse to the right of the playback interface.

Figure 5.35 Smart Search Result with Video List

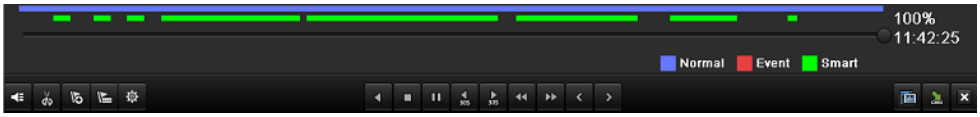


Figure 5.36 Toolbar of Smart Search Playback

Table 5.6 Detailed Explanation of Smart-search-playback Toolbar

Button	Operation	Button	Operation	Button	Operation	Button	Operation
	Audio on/Mute		Start/Stop clipping		30s forward		30s reverse
	Add default tag		Add customized tag		Tag management		Slow forward
	Pause reverse play/Reverse play/ Single-frame reverse play		Pause play/Play/Single-frame play		Stop		Fast forward
	Previous smart search result		Next smart search result		Video search		Exit
	Hide		Progress bar		Video type bar		Smart search bar

Notes:

1. Playback progress bar: use the mouse to click any point of the progress bar or drag the progress bar to locate special frames.
2. About video type bar: represents normal recording (manual or schedule); represents event recording (motion); represents smart search recording.

5.2.3 Digital Zoom

Steps:

1. Right click the mouse on a channel under playback and choose Digital Zoom to enter Digital Zoom interface.
2. Use the mouse to draw a red rectangle and the image within it will be enlarged up to 16 times.

Figure 5.37 Draw Area for Digital Zoom

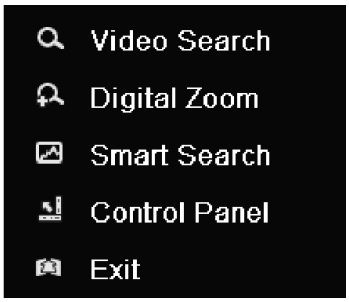


Figure 5.38 Right-click Menu in Playback Mode

Right-click menu:

Note: This menu differs slightly from one playback interface to another.

Table 5.7 Detailed Explanation of Right-click Menu under Playback

Button	Function
	Return to Playback interface
	Enter Digital Zoom interface
	Smart Search against a specified area
	Show & hide control interface
	Exit the video playback interface

C H A P T E R 6

Backup

6.1 Backing up Record Files

Before you start:

Please insert the backup device(s) into the device.

6.1.1 Quick Export

Purpose:

Export record files to backup device (s) quickly.

Steps:

1. Enter Video Export interface

   Menu>Export>Normal

Figure 6.1 Quick Export Interface

2. Choose the channel(s) you want to back up and click **Quick Export** button.

   Notes:

   1. The time duration of record files on a specified channel cannot exceed 24 hours. Otherwise, the message box “Max. 24 hours are allowed for quick export.” will pop up.
   2. The number of channels for synchronous export cannot exceed 4. Otherwise, the message box “Max. 4 channels are allowed for synchronous quick export.” will pop up.

Figure 6.2 Quick Export using USB1-1

3. In the Export interface, choose backup device and click **Export** button to start exporting.

   Note: Here we use USB Flash Drive and please refer to the next section Normal Backup for more backup devices supported by the device.

4. Stay in the Exporting interface until all record files are exported to the USB flash drive.

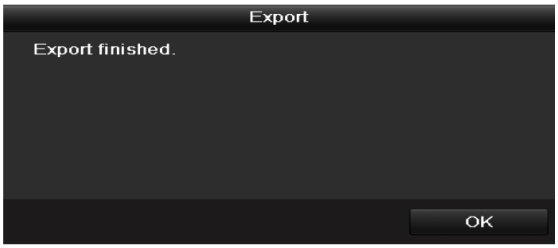


Figure 6.3 Export Finished

5. Check backup result.

   Choose the record file in Export interface and click button to check it.

Figure 6.4 Checkup of Quick Export Result Using USB1-1

6.1.2 Backing up by Normal Video Search

Purpose:

The record files can be backed up to USB devices (USB flash drives, USB HDDs, USB writer).

Backup using USB flash drives, USB HDDs and USB writer.

Steps:

1. Enter Export interface.

   Menu>Export>Normal

Figure 6.5 Normal Video Search for Backup

2. Set search conditions and click **Search** button to enter the search result interface.
3. Select record files you want to back up.

   Click button to play the record file if you want to check it.

   Check the checkbox before the record files you want to back up.

   Note: The size of the currently selected files is displayed in the lower-left corner of the window.

Figure 6.6 Result of Normal Video Search for Backup

4. Export the record files.

Click **Export** button and start backup.

Note: If the inserted device is not recognized:

- Click the **Refresh** button.
- Reconnect device.
- Check for compatibility from vendor.

You can also format USB flash drives or USB HDDs via the device. USB writer and SATA writer cannot be formatted.

Figure 6.7 Export by Normal Video Search using USB Flash Drive

Figure 6.8 Export by Normal Video Search using USB Writer

Stay in the Exporting interface until all record files are exported with pop-up message box "Export finished".

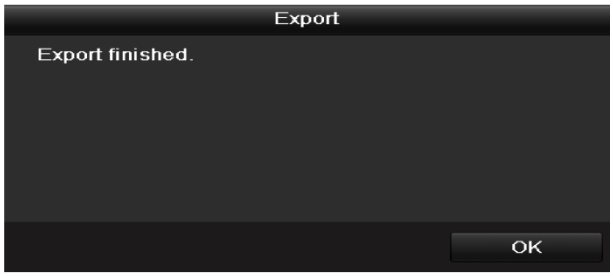


Figure 6.9 Export Finished

5. Check backup result.

Choose the record file in Export interface and click button to check it.

Figure 6.10 Checkup of Export Result using USB Flash Drive

Figure 6.11 Checkup of Export Result using USB Writer

6.1.3 Backing up by Event Search

Purpose:

Back up event-related record files using USB devices (USB flash drives, USB HDDs, USB writer), or SATA writer. Quick Backup and Normal Backup are supported.

Steps:

1. Enter Export interface.
   Menu>Export>Event
2. Select **Motion** as the event type.
3. Set the start time and end time of the record files.
4. Select the camera (s) for searching.

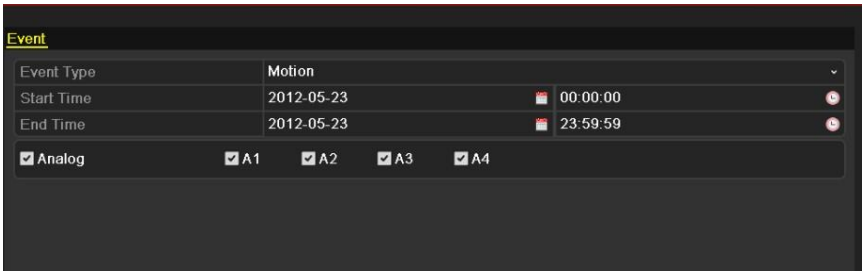


Figure 6.12 Event Search for Backup

5. Click **Search** button to enter the Search Result interface.

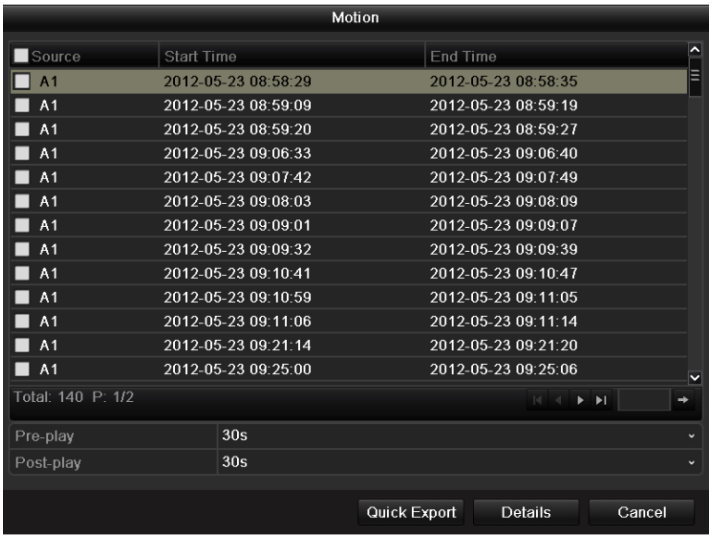


Figure 6.13 Result of Event Search

6. Select record files to export.

You can enter the Export interface by the following two ways:

- Select motion detection event (s) from the list and click **Quick Export** button to enter the Export interface, as shown in Figure 6.15.
- (1) Click the **Details** button to enter the interface with detailed information of the record file, e.g., start time, end time, file size, etc.

Note: The size of the currently selected files is displayed in the lower-left corner of the window.

(2) Select record file (s) from the list and click **Export** button to enter the Export interface, as shown in Figure 6.15.

Figure 6.14 Event Details Interface

7. Export the selected record files.

Click the **Export** button and start backing up.

Note: If the inserted USB device is not recognized:

- Click the Refresh button.
- Reconnect device.

- Check for compatibility from vendor.

You can also format USB flash drive or USB HDDs via the device.

Figure 6.15 Export by Event Using USB Flash Drive

Stay in the Exporting interface until all record files are exported with pop-up message “Export finished”.

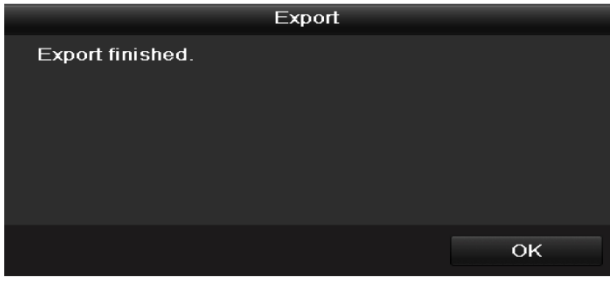


Figure 6.16 Export Finished

8. Check backup result.

Choose the record file in Export interface and click button to check it.

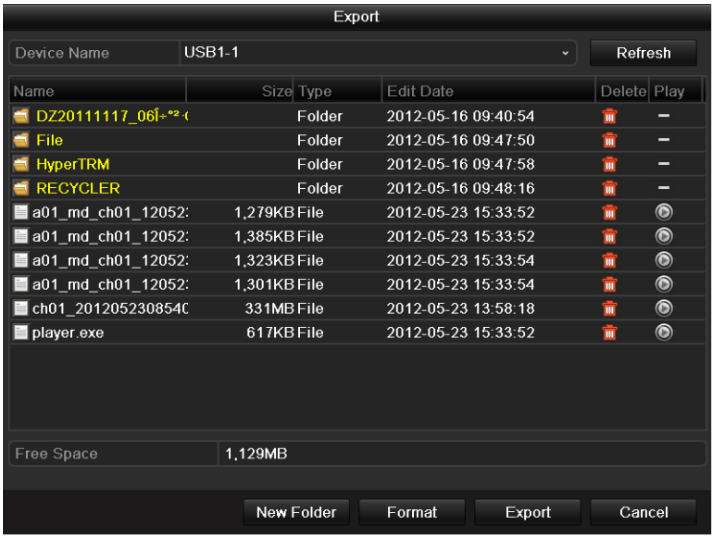


Figure 6.17 Checkup of Event Export Result Using USB Flash Drive

6.1.4 Backing up Video Clips

Purpose:

You may also select video clips to export directly during Playback, using USB devices (USB flash drives, USB HDDs, USB writer).

Steps:

1. Enter Playback interface.

   Please refer to *Chapter 5*.

2. During playback, use buttons and in the playback toolbar to start or stop clipping record file(s).

3. Exit Playback interface after finishing clipping and you will then be prompted to save the clips.

   Note: A maximum of 30 clips can be selected for each channel.

Figure 6.18 Interface of Playback by Time

4. Click **Yes** to save video clips and enter Export interface, or click **No** to quit and do not save video clips.

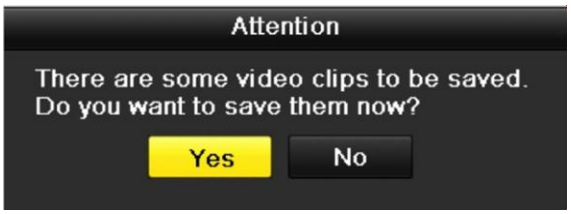


Figure 6.19 Attention to Video Clip Saving

5. Export the video clips.

   Click **Export** button and start backing up.

   Note: If the inserted USB device is not recognized:

   - Click the **Refresh** button.
   - Reconnect device.
   - Check for compatibility from vendor.

   You can also format USB flash drive or USB HDDs via the device.

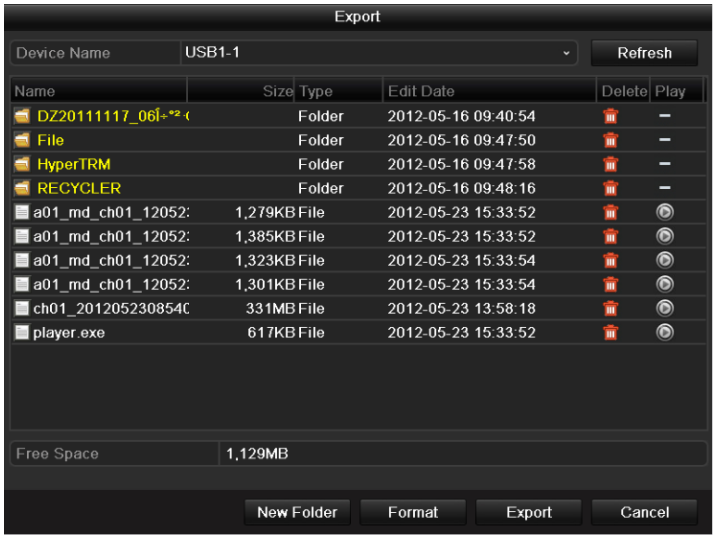


Figure 6.20 Export Video Clips Using USB Flash Drive

Stay in the Exporting interface until all record files are exported with pop-up message "Export finished".

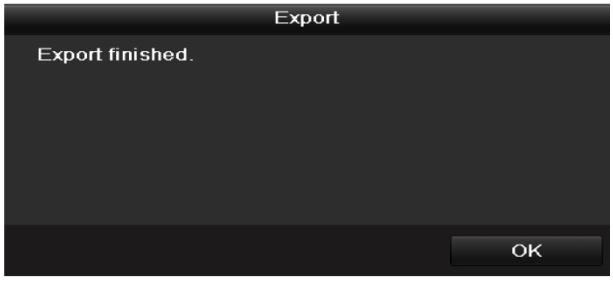


Figure 6.21 Export Finished

6. Check backup result.

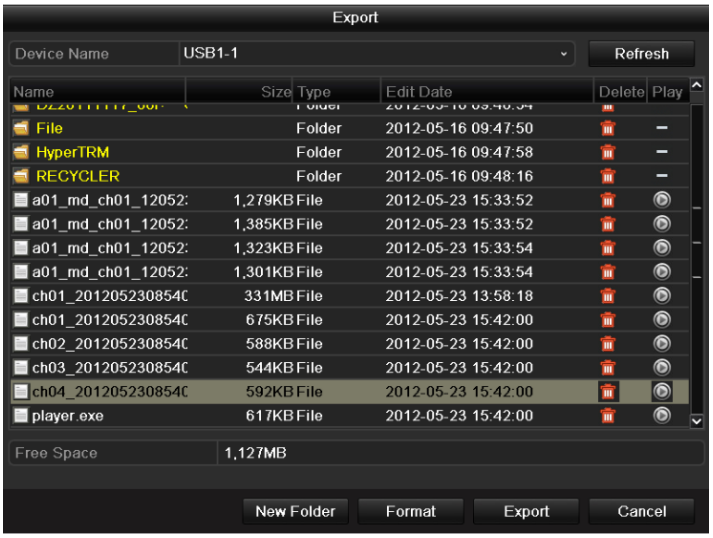


Figure 6.22 Checkup of Video Clips Export Result Using USB Flash Drive

6.2 Managing Backup Devices

Management of USB flash drives, and USB HDDs.

1. Enter Search Result interface of record files.

   Menu>Export>Normal

   Set search condition and click **Search** button to enter Search Result interface.

   Note: At least one channel shall be selected.

Figure 6.23 Normal Video Search

2. Select record files you want to back up.

   Click **Export** button to enter Export interface.

   Note: At least one record file shall be selected.

Figure 6.24 Result of Normal Video Search for Backup

3. Backup device management.

Click **New Folder** button if you want to create a new folder in the backup device.

Select a record file or folder in the backup device and click button if you want to delete it.

Select a record file in the backup device and click button to play it.

Click **Format** button to format the backup device.

Note: If the inserted USB device is not recognized:

- Click the **Refresh** button.
- Reconnect device.
- Check for compatibility from vendor.

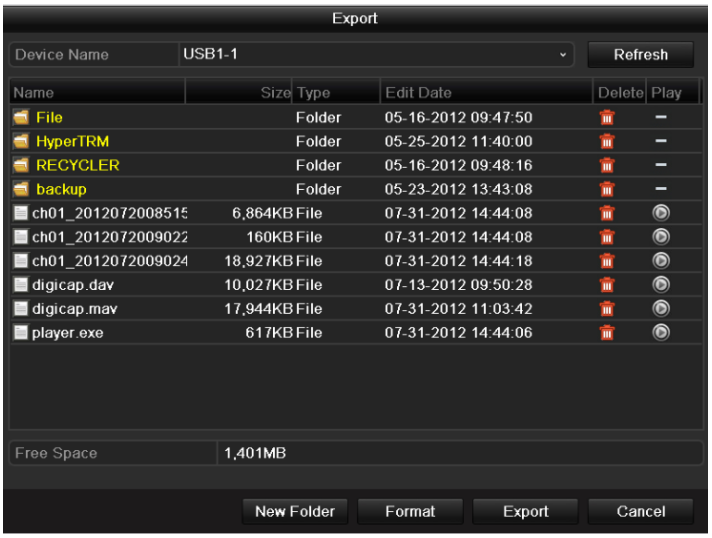


Figure 6.25 USB Flash Drive Management

Management of USB writers

1. Enter Search Result interface of record files.

Menu>Export>Normal

Set search condition and click **Search** button to enter Search Result interface.

Note: At least one channel shall be selected.

Figure 6.26 Normal Video Search for Backup

2. Select record files you want to back up.

   Click **Export** button to enter Export interface.

   Note: At least one record file shall be selected.

Figure 6.27 Result of Normal Video Search for Backup

3. Backup device management.

   Click **Erase** button if you want to erase the files from a re-writable CD/DVD.

   Note: There must be a re-writable CD/DVD when you make this operation.

   Note: If the inserted USB writer is not recognized:

   - Click the **Refresh** button.
   - Reconnect device.

- Check for compatibility from vendor.

Figure 6.28 USB Writer Management

C H A P T E R 7

Alarm Settings

7.1 Setting Motion Detection

Steps:

1. Enter Motion Detection interface and choose a camera you want to set motion detection.

   Menu> Camera> Motion

Figure 7.1 Motion Detection Setup Interface

2. Set motion detection area and sensitivity.

   1) Check the checkbox of **Enable Motion Detection** to enable motion detection, use the mouse to draw detection area(s) and drag the sensitivity bar to set sensitivity.

   2) Click the icon of **Handling** to set alarm response actions.

Figure 7.2 Set Detection Area and Sensitivity

3. Click **Trigger Channel** tab and select one or more channels which will start to record or become full-screen monitoring when motion alarm is triggered.

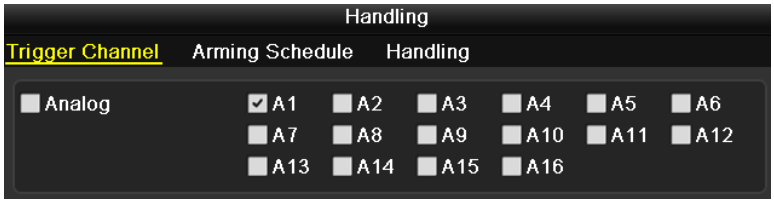


Figure 7.3 Set Trigger Camera of Motion Detection

4. Set up arming schedule of the channel.

1) Select **Arming Schedule** tab to set the channel's arming schedule.

2) Choose one day of a week and up to eight time periods can be set within each day.

Note: Time periods shall not be repeated or overlapped.

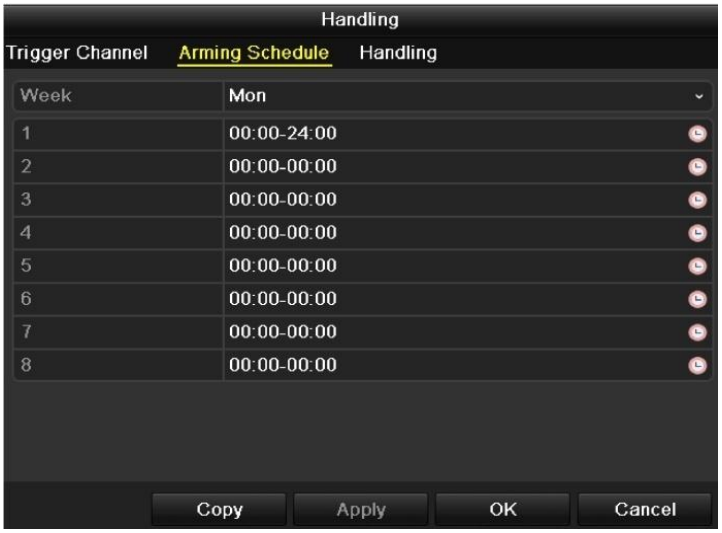


Figure 7.4 Set Arming Schedule of Motion Detection

5. Click **Handling** tab to set up alarm response actions of motion alarm (please refer to *Chapter 7.5*).

1) Repeat the above steps to set up arming schedule of other days of a week. You can also use **Copy** button to copy an arming schedule to other days.

2) Click the **OK** button to complete the motion detection settings of the channel.

6. If you want to set up motion detection for another channel, repeat the above steps or just copy the above settings to it.

Note: You are not allowed to copy the "Trigger Channel" action.

Figure 7.5 Copy Settings of Motion Detection

7.2 Detecting Video Loss

Purpose:

Detect video loss of a channel and take alarm response action(s).

Steps:

1. Enter Video Loss interface of Camera Management.

   Menu> Camera> Video Loss

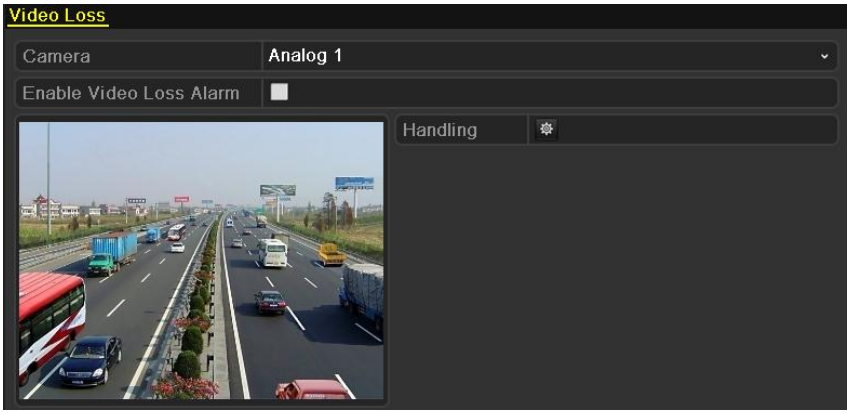


Figure 7.6 Video Loss Setup Interface

2. Select a channel you want to detect.
3. Check the checkbox of **Enable Video Loss Alarm**.
4. Click the icon of **Handling** to enter the Handling interface.
5. Set the arming schedule and alarm response actions. Please refer to Step4 and Step5 of *Chapter 7.1 Setting Motion Detection*.

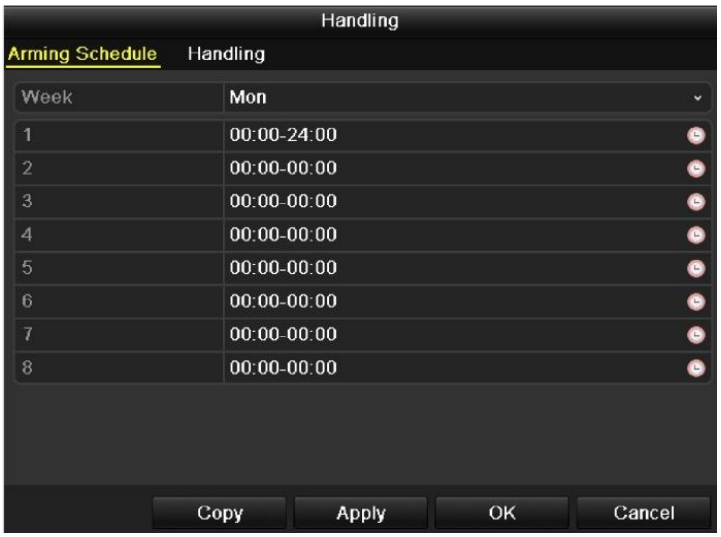


Figure 7.7 Set Arming Schedule of Video Loss

6. Click **Apply** to save the video loss alarm settings.

7.3 Detecting Video Tampering

Purpose:

Trigger alarm when the lens is covered and take alarm response action(s).

Steps:

1. Enter Video Tampering interface of Camera Management.

   Menu> Camera> Tamper-proof

Figure 7.8 Tamper-proof Setup Interface

2. Select a channel you want to detect video tampering.
3. Check the checkbox of **Enable Tamper-proof**.

Note: By default, the tamper-proof detection is configured in full screen.

4. Move the sensitivity bar and choose a proper sensitivity level.
5. Click the icon of **Handling** to enter the Handling interface.
6. Set the arming schedule and alarm response actions. Please refer to Step4 and Step5 of *Chapter 8.1 Setting Motion Detection.*
7. If you want to set tamper-proof handling method for another channel, repeat above steps or click **Copy** to copy the above settings to it.

Figure 7.9 Copy Settings of Video Tampering

7.4 Handling Exceptions

Purpose:

Exception settings refer to the handling method of various exceptions, including:

- **HDD Full:** The HDD is full.
- **HDD Error:** Writing HDD error, unformatted HDD, etc.
- **Network Disconnected:** Disconnected network cable.
- **IP Conflicted:** Duplicated IP address.
- **Illegal Login:** Incorrect user ID or password.
- **Input / Output Video Standard Mismatch:** I/O video standards do not match.
- **Record Exception:** No space for saving recorded file.

Steps:

Enter **Exceptions** interface of System Configuration and handle various exceptions.

Menu> Configuration> Exceptions

Please refer to *Chapter 7.5* for detailed alarm response actions.

Figure 7.10 Exceptions Setup Interface

7.5 Setting Alarm Response Actions

Purpose:

The alarm response actions will be activated when an exception occurs, including Full Screen Monitoring, Audible Warning, Notify Surveillance Center, and Send Email.

Full Screen Monitoring

When an alarm event (motion detection/tamper-proof/video loss detection) is triggered, the local monitor (VGA or BNC monitor) display in full screen the video image from the alarming channel configured for full screen monitoring.

If alarms are triggered simultaneously in several channels, their full-screen images will be switched at an interval of 10 seconds (default dwell time). A different dwell time can be set by going to Menu> Configuration>Live View>Full Screen Monitoring Dwell Time.

Auto-switch will terminate once the alarm stops and you will be taken back to the Live View interface.

Note: For motion detection alarm, you must select the channel(s) you want to make full screen monitoring (Menu>Camera>Motion>Handling>Trigger Channel).

Audible Warning

Trigger an audible *beep* when an alarm is detected.

Notify Surveillance Center

Sends an exception or alarm signal to remote alarm host when an event occurs. The alarm host refers to the PC installed with Remote Client.

Note: The alarm signal will be transmitted automatically at detection mode when remote alarm host is configured. Please refer to *Chapter 8.2.5* for details of alarm host configuration.

Send Email

Send an email with alarm information to a user or users when an alarm event is detected.

Please refer to *Chapter 8.2.9* for details of Email configuration.

C H A P T E R 8

Network Settings

8.1 Configuring General Settings

Purpose:

Network settings must be properly configured before you operate device over network.

Steps:

1. Enter the Network Settings interface.

   Menu > Configuration > Network

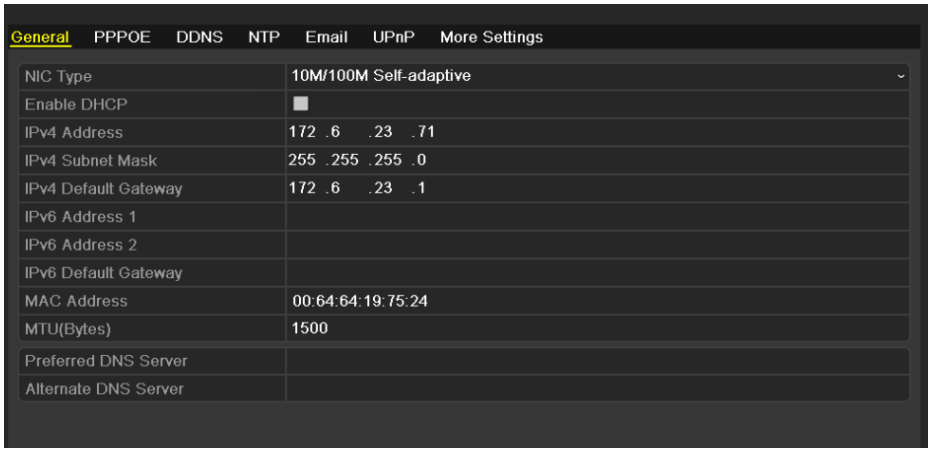


Figure 8.1 General Network Settings Interface

2. Select the **General** tab.
3. In the **General Settings** interface:

   You can configure the following settings: NIC Type, IPv4 Address, IPv4 Gateway, MTU and DNS Server.

   If the DHCP server is available, you can click the checkbox of **DHCP** to automatically obtain an IP address and other network settings from that server.

   Note: The valid value range of MTU is 1280 ~ 1500.
4. After having configured the general settings, click the **Apply** button to save the settings.

8.2 Configuring Advanced Settings

8.2.1 Configuring PPPoE Settings

Purpose:

Your device also allows access by Point-to-Point Protocol over Ethernet (PPPoE).

Steps:

1. Enter the **Network Settings** interface.

   Menu > Configuration > Network
2. Select the **PPPoE** tab to enter the PPPoE Settings interface.

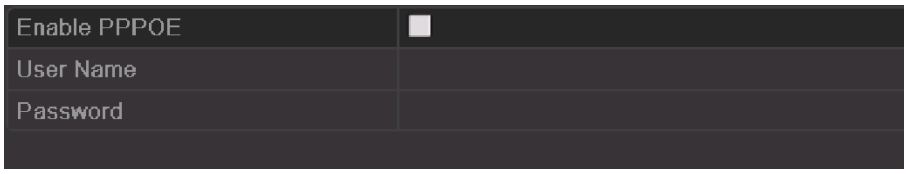


Figure 8.2 PPPoE Settings Interface

3. Check the **PPPoE** checkbox to enable this feature.
4. Enter **User Name** and **Password** for PPPoE access.

Note: The User Name and Password should be assigned by your ISP.

Figure 8.3 PPPoE Settings Interface

5. Click the **Apply** button to save and exit the interface.
6. After successful settings, the system asks you to reboot the device to enable the new settings, and the PPPoE dial-up is automatically connected after reboot.
   You can go to Menu>Maintenance>System Info>Network interface to view the status of PPPoE connection. Please refer to *Chapter 11.1Viewing System Information* for PPPoE status.

8.2.2 Configuring DDNS

Purpose:

If your device is set to use PPPoE as its default network connection, you may set Dynamic DNS (DDNS) to be used for network access.

Prior registration with your ISP is required before configuring the system to use DDNS.

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **DDNS** tab to enter the DDNS Settings interface.

Figure 8.4 DDNS Settings Interface

3. Check the **DDNS** checkbox to enable this feature.
4. Select **DDNS Type**. Five different DDNS types are selectable: IPServer, DynDNS, PeanutHull, NO-IP and hkDDNS.
   - **IPServer:** Enter **Server Address** for IPServer.
     Note: The **Server Address** should be the IP address of the PC that runs IPServer.

Figure 8.5 IPServer Settings Interface

- **DynDNS:**
  1) Enter **Server Address** for DynDNS (e.g. members.dyndns.org).
  2) In the **Device Domain Name** text field, enter the domain obtained from the DynDNS website.
  3) Enter the **User Name** and **Password** registered in the DynDNS website.

Figure 8.6 DynDNS Settings Interface

- **PeanutHull:** Enter User Name and Password obtained from the PeanutHull website.

Figure 8.7 Peanut Hull Settings Interface

- **NO-IP:**

  Enter the account information in the corresponding fields. Refer to the DynDNS settings.
  1) Enter **Server Address** for NO-IP.
  2) In the **Device Domain Name** text field, enter the domain obtained from the NO-IP website (www.no-ip.com).
  3) Enter the **User Name** and **Password** registered in the NO-IP website.

Figure 8.8 NO-IP Settings Interface

- **hkDDNS:** You need to enter the **Server Address** and **Device Domain Name** for hkDDNS, and other fields are read only.

  1) Enter the **Server Address** of the hkDDNS server: www.hiddns.com.

  2) Enter the **Device Domain Name.** You can register the alias of the device domain name in the hkDDNS server first and then enter the alias to the **Device Domain Name** in the DVR; you can also enter the domain name directly on the DVR to create a new one.

  Note: If a new alias of the device domain name is defined in the DVR, it will replace the old one registered on the server.

Figure 8.9 hkDDNS Settings Interface

Register the device on the hkDDNS server.

1) Go to the hkDDNS website: *www.hiddns.com*.

2) Click Register new user to register a user account if you do not have one.

3) After registration is successful, use the account and password to log in.

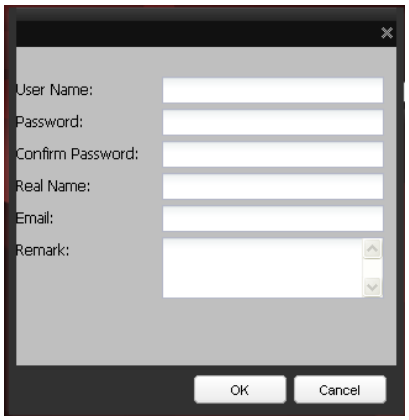


Figure 8.10 Register an Account

4) In the DDNS Management System interface, click the **Device Management** tab on the left menu bar and then click Add to register the device.

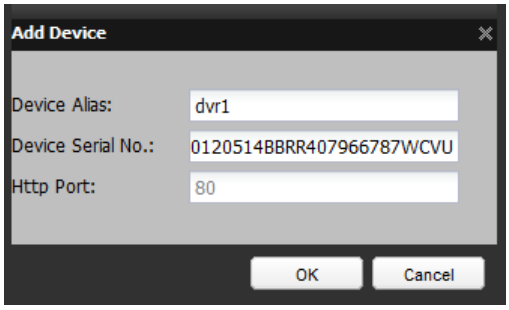


Figure 8.11 Register the Device

Note: Only lower-case English alphabet, numeric and '-' can be used in the alias of the device and the alias must be started with letters of the lower-case English alphabet.

5. Click the **Apply** button to save and exit the interface.

8.2.3 Configuring NTP Server

Purpose:

A Network Time Protocol (NTP) Server can be configured on your device to ensure the accuracy of system date/time.

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **NTP** tab to enter the NTP Settings interface.

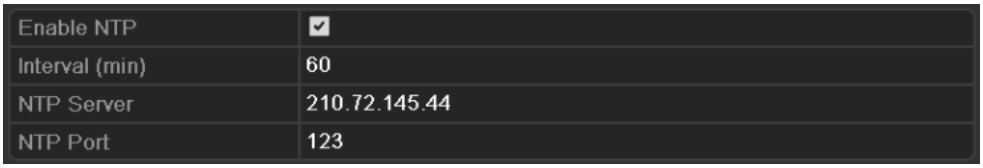


Figure 8.12 NTP Settings Interface

3. Check the **Enable NTP** checkbox to enable this feature.
4. Configure the following NTP settings:
   - **Interval:** Time interval between the two synchronizing actions with NTP server. The unit is minute.
   - **NTP Server:** IP address of NTP server.
   - **NTP Port:** Port of NTP server.
5. Click the **Apply** button to save and exit the interface.

Note: The time synchronization interval can be set from 1 to 10080min, and the default value is 60min. If the device is connected to a public network, you should use a NTP server that has a time synchronization function, such as the server at the National Time Center (IP Address: 210.72.145.44). If the device is setup in a more customized network, NTP software can be used to establish a NTP server used for time synchronization.

8.2.4 Configuring UPnP™

Purpose:

UPnP™ can permits the device seamlessly discover the presence of other network devices on the network and establish functional network services for data sharing, communications, etc. If you want to use the UPnP™ function to enable the fast connection of the device to the WAN via a router, you should configure the UPnP™ parameters of the device.

Before you start:

If you want to enable the UPnP™ function of the device, you must enable the UPnP™ function of the router to which your device is connected. When the network working mode of the device is set as multi-address, the Default Route of the device should be in the same network segment as that of the LAN IP address of the router.

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **UPnP** tab to enter the UPnP™ interface.

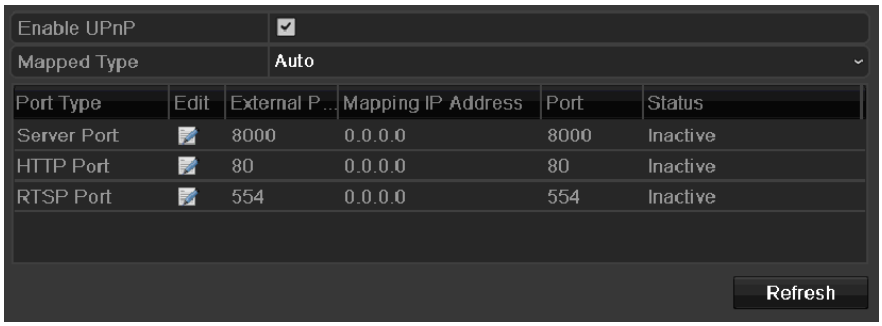


Figure 8.13 UPnP™ Settings Interface

3. Check checkbox to enable UPnP™.
4. Select the mapped type to Auto or Manual.
   When you select **Auto**, the mapping ports can be automatically assigned by the router. When you select **Manual**, you should continue Step5 to edit the mapping ports.
5. Click to open the External Port Settings dialog box. Configure the external port No. for server port, HTTP port and RTSP port respectively.

   Notes:

   1) You can use the default port No., or change it according to actual requirements.
   2) External Port indicates the port No. for port mapping in the router.

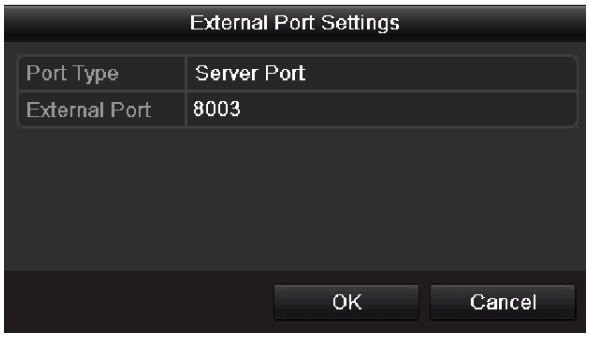


Figure 8.14 External Port Settings Dialog Box

6. You can click **Refresh** to get the latest status of the port mapping.

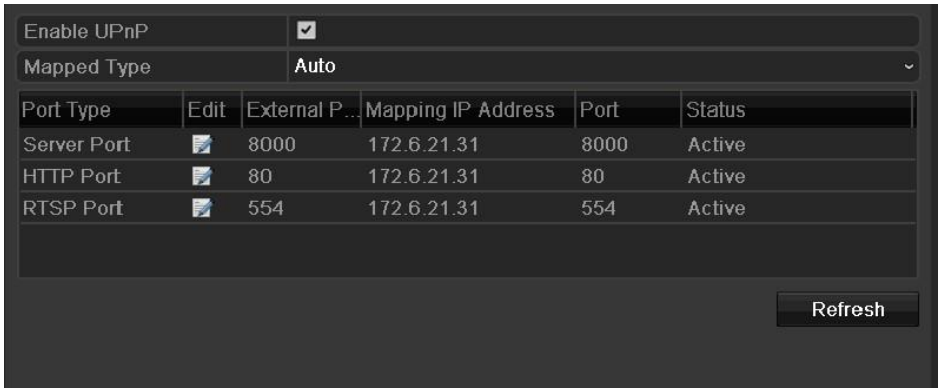


Figure 8.15 UPnP™ Settings Finished

7. Click the **Apply** button to save the settings.

8.2.5 Configuring Remote Alarm Host

Purpose:

With a remote alarm host configured, the device will send the alarm event or exception message to the host when an alarm is triggered. The remote alarm host must have the CMS (Client Management System) software installed.

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **More Settings** tab to enter the More Settings interface.

Figure 8.16 More Settings Interface

3. Enter **Alarm Host IP** and **Alarm Host Port** in the text fields.
   The **Alarm Host IP** refers to the IP address of the remote PC on which the CMS (Client Management System) software (e.g., iVMS-4200) is installed, and the **Alarm Host Port** must be the same as the alarm monitoring port configured in the software (default port is 7200).

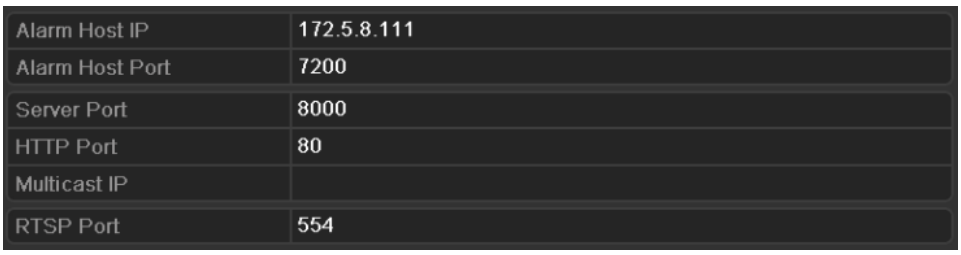


Figure 8.17 Configure Alarm Host

4. Click the **Apply** button to save and exit the interface.

8.2.6 Configuring Multicast

Purpose:

The multicast can be configured to realize live view for more than the maximum number of cameras through network.

A multicast address spans the Class-D IP range of 224.0.0.0 to 239.255.255.255. It is recommended to use the IP address ranging from 239.252.0.0 to 239.255.255.255.

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **More Settings** tab to enter the More Settings interface.
3. Set **Multicast IP**. When adding a device to the CMS (Client Management System) software, the multicast address must be the same as the device's multicast IP.

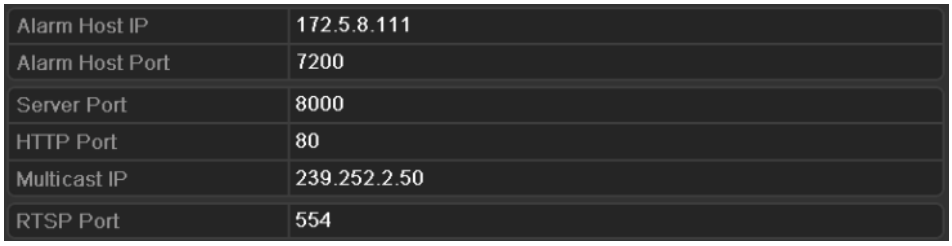


Figure 8.18 Configure Multicast

4. Click the **Apply** button to save and exit the interface.

8.2.7 Configuring RTSP

Purpose:

The RTSP (Real Time Streaming Protocol) is a network control protocol designed for use in entertainment and communications systems to control streaming media servers.

Steps:

1. Enter the Network Settings menu by clicking Menu > Configuration > Network.
2. Select the **More Settings** tab to enter the More Settings men.

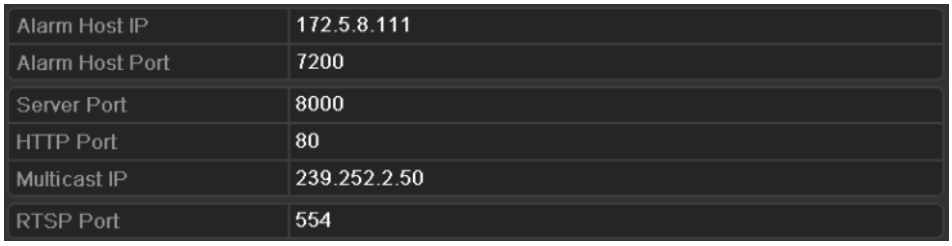


Figure 8.19 RTSP Settings Interface

3. Enter the RTSP port in the text field of **RTSP Service Port**. The default RTSP port is 554, and you can change it according to different requirements.

4. Click the **Apply** button to save and exit the menu.

8.2.8 Configuring Server and HTTP Ports

Purpose:

You can change the server and HTTP ports in the Network Settings menu. The default server port is 8000 and the default HTTP port is 80.

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Select the **More Settings** tab to enter the More Settings interface.
3. Enter new **Server Port** and **HTTP Port**.

Figure 8.20 Host/Others Settings Menu

4. Enter the Server Port and HTTP Port in the text fields. The default Server Port is 8000 and the HTTP Port is 80, and you can change them according to different requirements.
5. Click the **Apply** button to save and exit the interface.

Note: The Server Port should be set to the range of 2000-65535 and it is used for remote client software access. The HTTP port is used for remote IE access.

8.2.9 Configuring Email

Purpose:

The system can be configured to send an Email notification to all designated users if an alarm event is detected, a motion detection event is detected, etc.

Before configuring the Email settings, the device must be connected to a local area network (LAN) that maintains an SMTP mail server. The network must also be connected to either an intranet or the Internet depending on the location of the e-mail accounts to which you want to send notification.

Steps:

1. Enter the Network Settings interface.
   Menu > Configuration > Network
2. Set the IPv4 Address, IPv4 Subnet Mask, IPv4 Gateway and the Preferred DNS Server in the Network Settings menu.

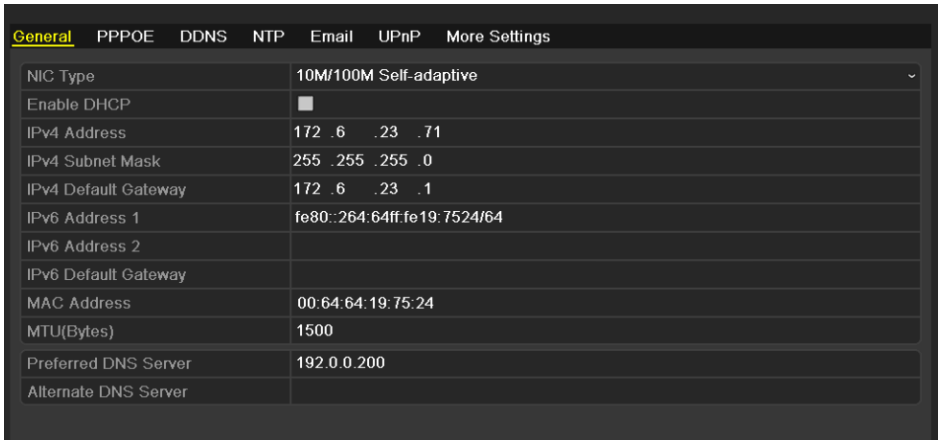


Figure 8.21 Network Settings Interface

3. Click the **Apply** button to save the settings.
4. Select the **Email** tab to enter the Email Settings interface.

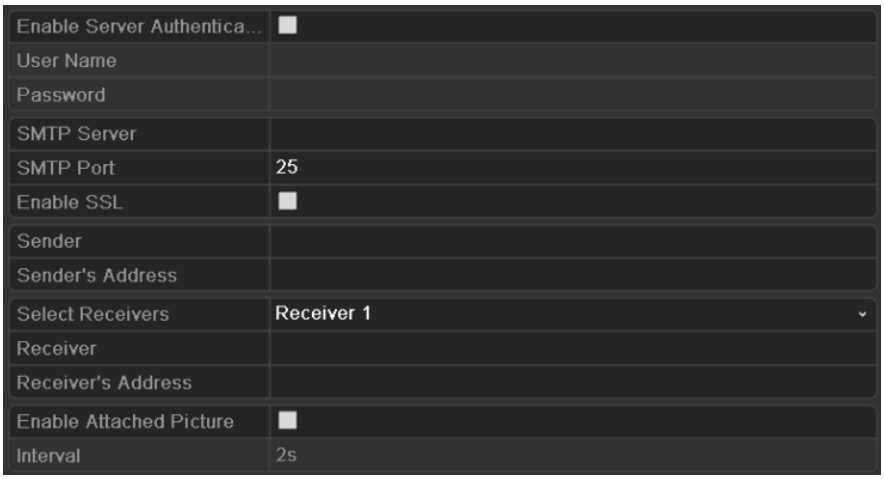


Figure 8.22 Email Settings Interface

5. Configure the following Email settings:

Enable Server Authentication (optional): Check the checkbox to enable the server authentication feature.

User Name: The user account of sender's Email for SMTP server authentication.

Password: The password of sender's Email for SMTP server authentication.

SMTP Server: The SMTP Server IP address or host name (e.g., smtp.263xmail.com).

SMTP Port: The SMTP port. The default TCP/IP port used for SMTP is 25.

Enable SSL (optional): Click the checkbox to enable SSL if required by the SMTP server.

Sender: The name of sender.

Sender's Address: The Email address of sender.

Select Receivers: Select the receiver. Up to 3 receivers can be configured.

Receiver: The name of user to be notified.

Receiver's Address: The Email address of user to be notified.

Enable Attached Pictures: Check the checkbox of **Enable Attached Picture** if you want to send email with attached alarm images.

Interval: The interval refers to the time between two actions of sending attached pictures.

Figure 8.23 Configure Email Settings

6. Click the **Apply** button to save the Email settings.
7. You can click the **Test** button to test whether your Email settings work. The corresponding Attention message box will pop up.

Figure 8.24 Email Testing Attention

8.3 Checking Network Traffic

Purpose:

You can check the network traffic to obtain real-time information of device such as linking status, MTU, sending/receiving rate, etc.

Steps:

1. Enter the Network Traffic interface.

   Menu > Maintenance > Net Detect

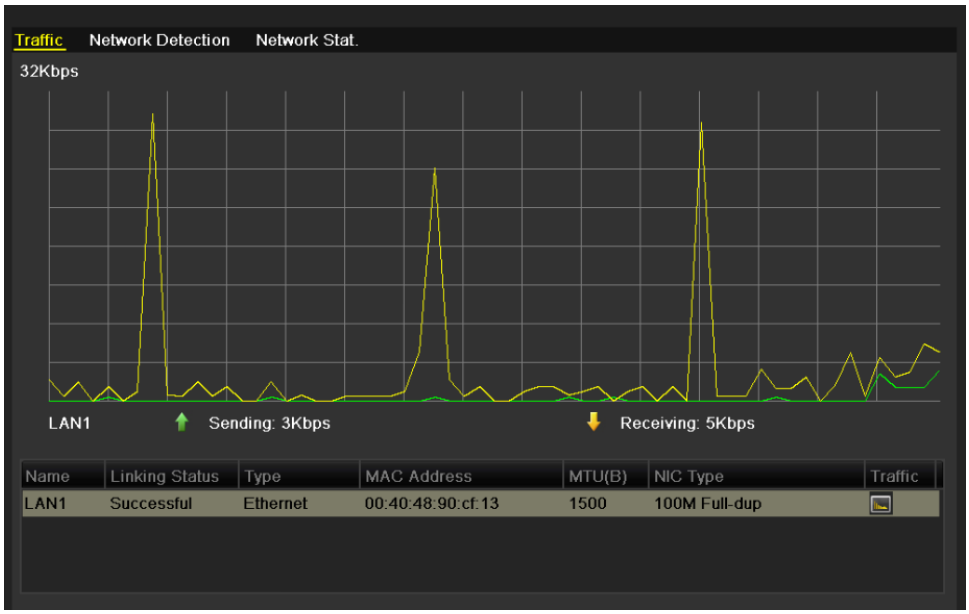


Figure 8.25 Network Traffic Interface

2. You can view the sending rate and receiving rate information on the interface. The traffic data is refreshed every 1 second.

8.4 Network Detection

Purpose:

You can obtain network connecting status of device through the network detection function, including network delay, packet loss, etc.

8.4.1 Testing Network Delay and Packet Loss

Steps:

1. Enter the Network Traffic interface.
   Menu > Maintenance > Net Detect
2. Click the **Network Detection** tab to enter the Network Detection menu.

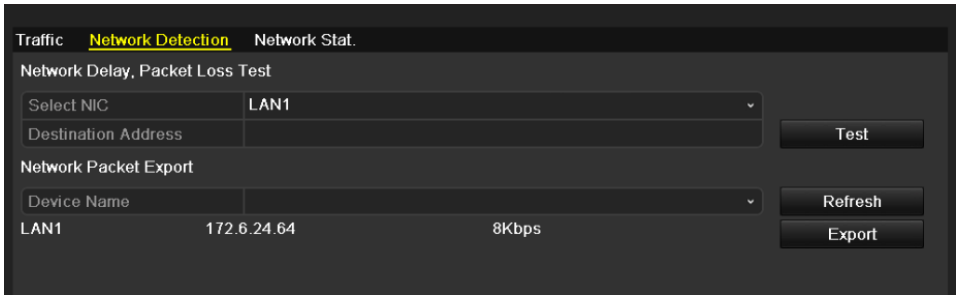


Figure 8.26 Network Detection Interface

3. Enter the destination address in the text field of **Destination Address**.
4. Click the **Test** button to start testing network delay and packet loss. The testing result pops up on the window. If the testing is failed, the error message box will pop up as well. .

Figure 8.27 Testing Result of Network Delay and Packet Loss

8.4.2 Exporting Network Packet

Purpose:

By connecting the device to network, the captured network data packet can be exported to USB-flash disk and other local backup devices.

Steps:

1. Enter the Network Traffic interface.
   Menu > Maintenance > Net Detect
2. Click the **Network Detection** tab to enter the Network Detection interface.

3. Select the backup device from the dropdown list of Device Name, as shown in Figure 8.28.

   Note: Click the **Refresh** button if the connected local backup device cannot be displayed. When it fails to detect the backup device, please check whether it is compatible with the device. You can format the backup device if the format is incorrect.

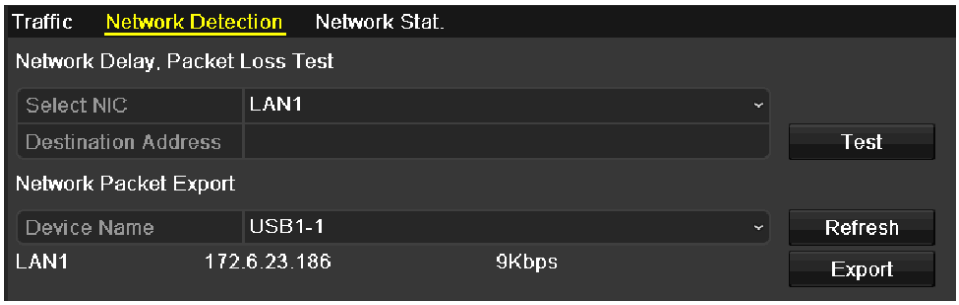
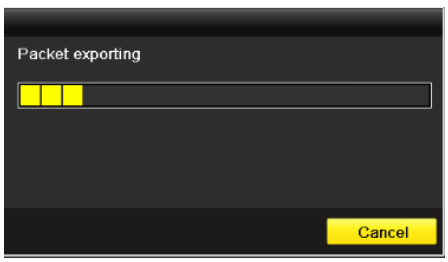


Figure 8.28 Export Network Packet

4. Click the **Export** button to start exporting.
5. After the exporting is complete, click **OK** to finish the packet export.



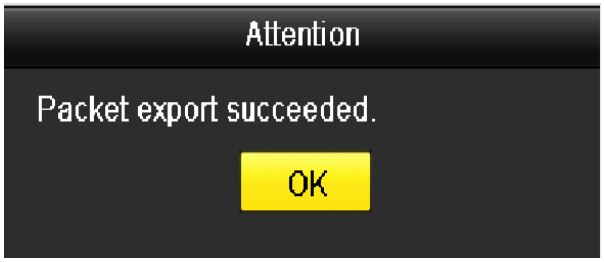


Figure 8.29 Packet Export Attention

Note: Up to 1M data can be exported each time.

8.4.3 Checking Network Status

Purpose:

You can also check the network status and quick set the network parameters in this interface.

Steps:

Click **Status** on the right bottom of the page.

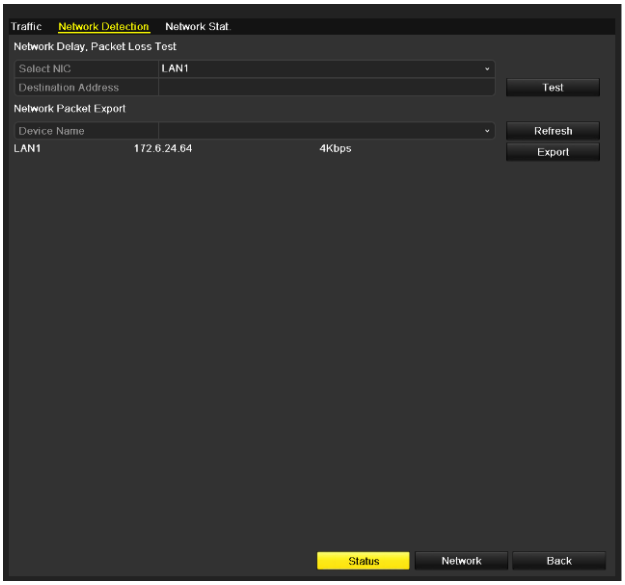


Figure 8.30 Checking Network Status

If the network is normal the following message box pops out.

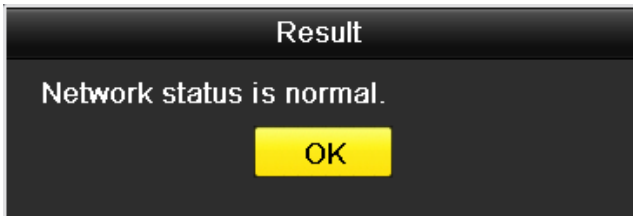


Figure 8.31 Network Status Checking Result

If the message box pops out with other information instead of this one, you can click **Network** button to show the quick setting interface of the network parameters.

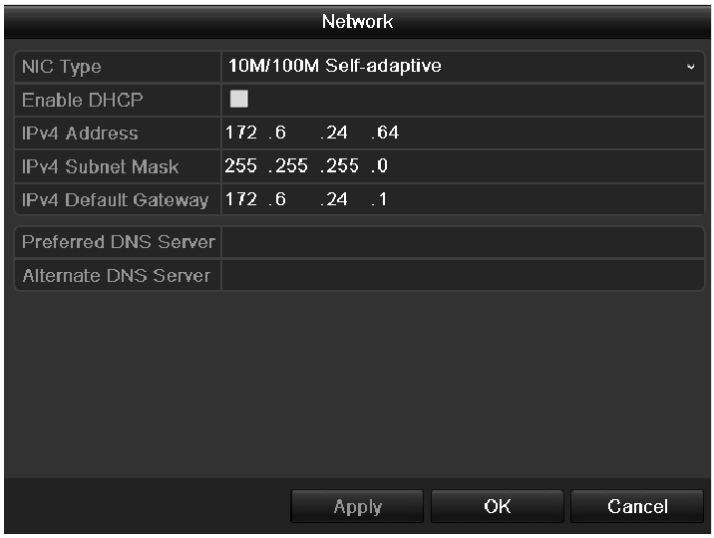


Figure 8.32 Network Parameters Configuration

8.4.4 Checking Network Statistics

Purpose:

You can check the network statistics to obtain the real-time information of the device.

Steps:

1. Enter the Network Statistics interface.

   Menu > Maintenance> Net Detect

2. Click the **Network Stat.** tab to enter the Network Statistics menu.

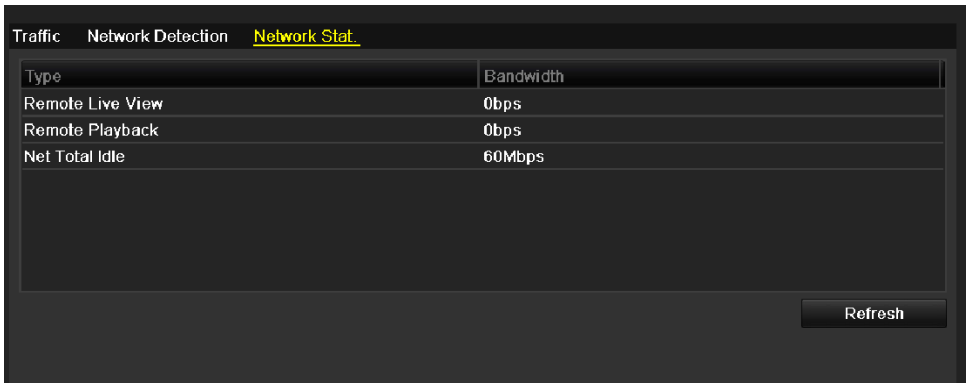


Figure 8.33 Network Stat. Interface

3. View the bandwidth of Remote Live View, bandwidth of Remote Playback, bandwidth of Net Total Idle information.
4. Click **Refresh** button to get the latest bandwidth statistics.

C H A P T E R 9

HDD Management

9.1 Initializing HDDs

Purpose:

A newly installed hard disk drive (HDD) must be initialized before it can be used with your device.

Steps:

1. Enter the HDD Information interface.

   Menu > HDD>General

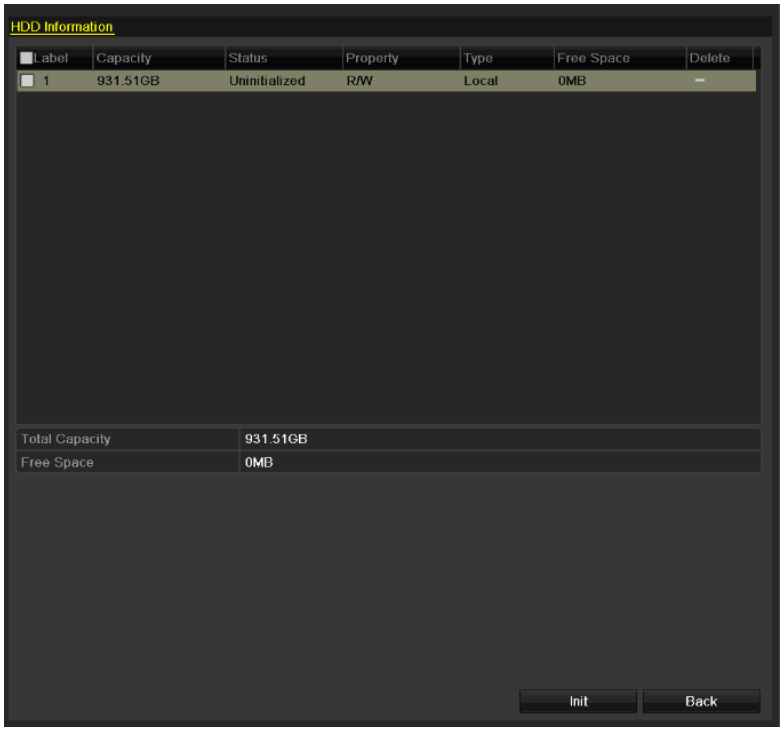


Figure 9.1 HDD Information Interface

2. Select the HDD to be initialized.
3. Click the **Init** button.

Figure 9.2 Confirm Initialization

4. Select the **OK** button to start initialization.

Figure 9.3 Start Initialization

5. After the HDD has been initialized, the status of the HDD will change from *Uninitialized* to *Normal*.

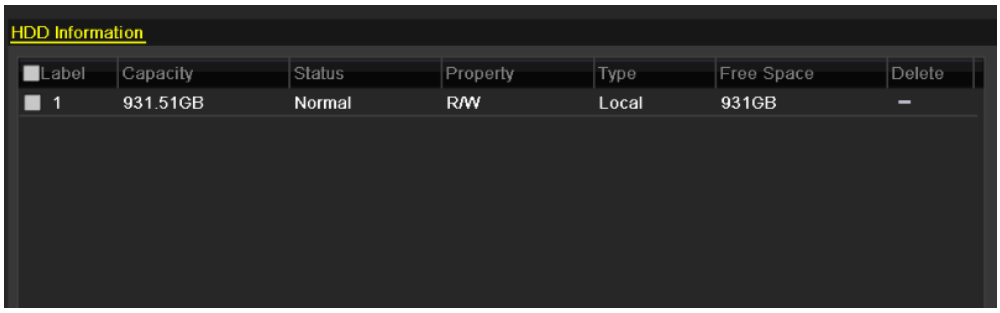


Figure 9.4 HDD Status Changes to Normal

Note: Initializing the HDD will erase all data on it.

9.2 Configuring Quota Mode

Purpose

Each camera can be configured with allocated quota for the storage of recorded files.

Steps

1. Enter the Storage Mode interface.

   Menu > HDD > Advanced

2. Set the **Mode** to **Quota**.

   Note: The device must be rebooted to activate the settings.

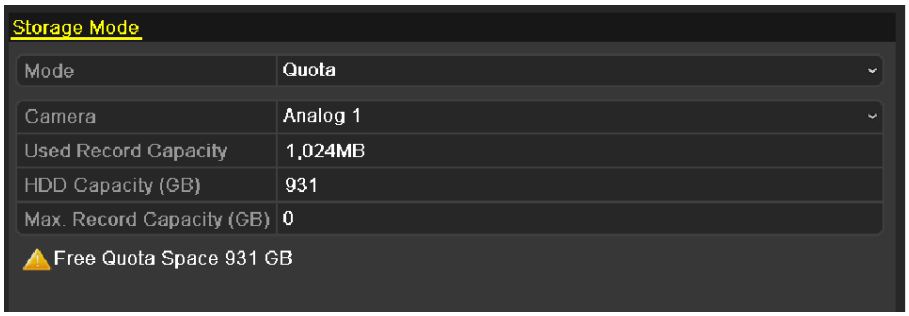


Figure 9.5 Storage Mode Settings Interface

3. Enter the storage capacity in the text field of **Max. Record Capacity (GB)**.

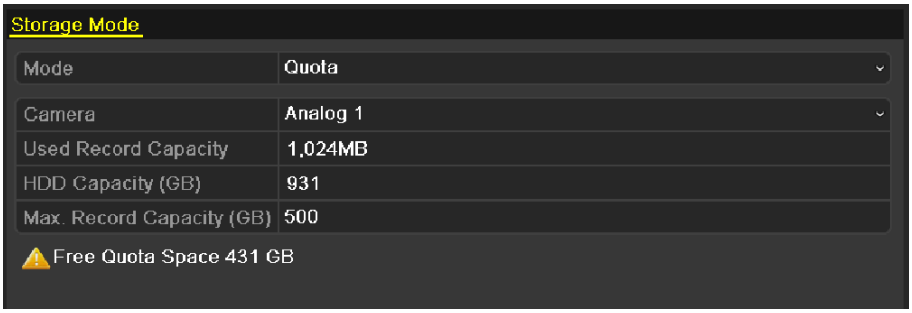


Figure 9.6 Configure Record Quota

4. You can copy the quota settings of the current camera to other cameras if required. Click the **Copy** button to enter the Copy Camera menu, as shown below.

Figure 9.7 Copy Settings to Other Camera(s)

5. Select the camera (s) to be configured with the same quota settings. You can also click the checkbox of **Analog** to select all cameras.
6. Click the **OK** button to finish the Copy settings and back to the Storage Mode interface.
7. Click the **Apply** button to apply the settings.

Note: If the quota capacity is set to *0*, then all cameras will use the total capacity of HDD for recording.

9.3 Checking HDD Status

Purpose:

You may check the status of the installed HDD on device so as to take immediate check and maintenance in case of HDD failure.

Checking HDD Status in HDD Information Interface

Steps:

1. Enter the HDD Information interface.
   Menu > HDD>General
2. Check the status of each HDD which is displayed on the list.

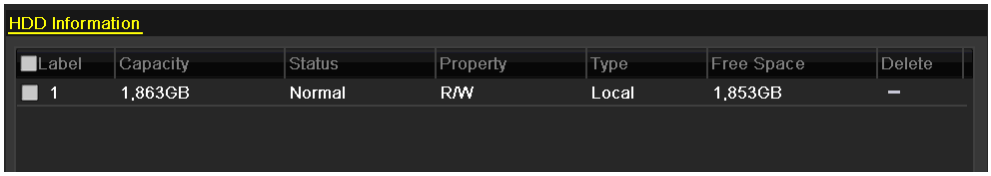


Figure 9.8 View HDD Status (1)

Note: If the status of HDD is *Normal* or *Sleeping*, it works normally. If the status is *Uninitialized* or *Abnormal*, please initialize the HDD before use. And if the HDD initialization is failed, please replace it with a new one.

Checking HDD Status in HDD Information Interface

Steps:

1. Enter the System Information interface.
   Menu > Maintenance > System Info
2. Click the **HDD** tab to view the status of HDD displayed on the list.

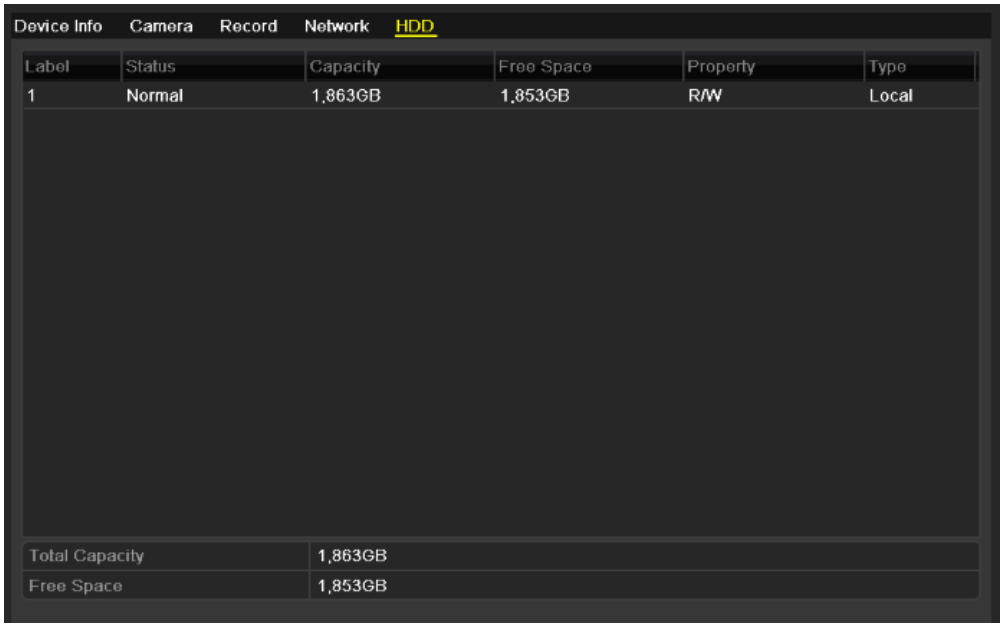


Figure 9.9 View HDD Status (2)

9.4 Checking S.M.A.R.T. Information

Purpose:

The S.M.A.R.T. *(*Self-Monitoring, Analysis and Reporting Technology*)* is a monitoring system for HDD to detect and report on various indicators of reliability in the hopes of anticipating failures.

Steps:

1. Enter the S.M.A.R.T. Settings interface.
   Menu > HDD >HDD Detect >S.M.A.R.T. Settings
2. Select the HDD to view its S.M.A.R.T. information list.
   Note: If you want to use the HDD even when the S.M.A.R.T. checking is failed, you can check the checkbox before the **Continue to use this disk when self-evaluation is failed** item.
3. Three self-tests of S.M.A.R.T are provided, including Short Test, Expanded Test and Conveyance Test. You can select a self-test type and click to start self-test.

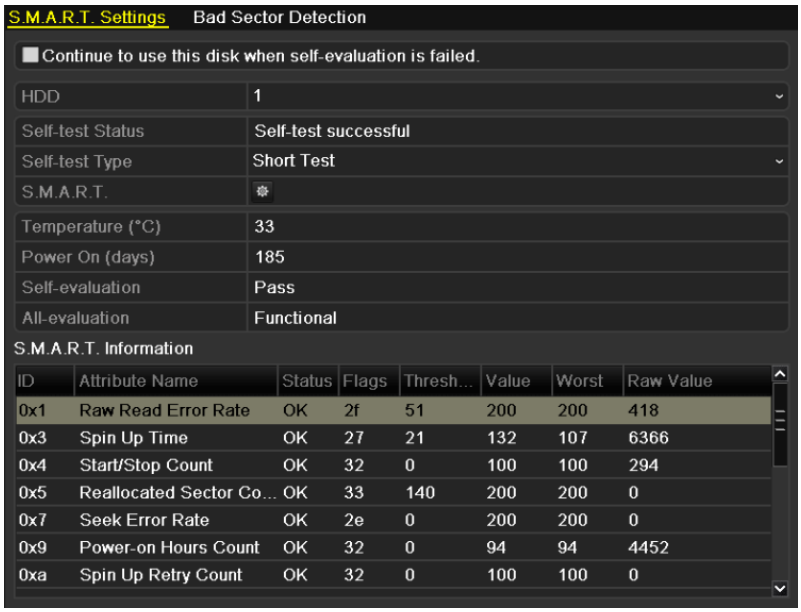

S.M.A.R.T. Settings
Bad Sector Detection
Continue to use this disk when self-evaluation is failed.
HDD
1
Self-test Status
Self-test successful
Self-test Type
Short Test
S.M.A.R.T.
Temperature (°C)
33
Power On (days)
185
Self-evaluation
Pass
All-evaluation
Functional
S.M.A.R.T. Information
ID Attribute Name Status Flags Thresh... Value Worst Raw Value
0x1 Raw Read Error Rate OK 2f 51 200 200 418
0x3 Spin Up Time OK 27 21 132 107 6366
0x4 Start/Stop Count OK 32 0 100 100 294
0x5 Reallocated Sector Co... OK 33 140 200 200 0
0x7 Seek Error Rate OK 2e 0 200 200 0
0x9 Power-on Hours Count OK 32 0 94 94 4452
0xa Spin Up Retry Count OK 32 0 100 100 0

Figure 9.10 S.M.A.R.T. Settings Interface

9.5 Detecting Bad Sector

Purpose:

The bad sectors of a HDD may cause the system to slow down when reading or writing data. You can detect the bad sectors of the HDD and thus to take immediate measures to repair it.

Steps:

1. Enter the Bad Sector Detection interface.

   Menu>HDD>HDD Detect>Bad Sector Detection

Figure 9.11 Bad Sector Detection

2. Click **Detect** to start detecting.

Figure 9.12 Bad Sector Detecting

3. You can click **Pause** to pause the detection and click **Resume** to resume the detection.
4. If there is any error information about the HDD, you can click **Error info** to view the information.

9.6 Configuring HDD Error Alarms

Purpose:

You can configure the HDD error alarms when the HDD status is *Uninitialized* or *Abnormal*.

Steps:

1. Enter the Exception interface.
   Menu > Configuration > Exceptions
2. Select the Exception Type to **HDD Error** from the dropdown list.
3. Click the checkbox(s) below to select the HDD error alarm type (s).

Note: The alarm type can be selected to: Audio Warning, Notify Surveillance Center, and Send Email. Please refer to *Chapter 7.5 Setting Alarm Response Actions*.

Figure 9.13 Configure HDD Error Alarm

4. Click the **Apply** button to save the settings.

C H A P T E R 10

Camera Settings

10.1 Configuring OSD Settings

Purpose:

You can configure the OSD (On-screen Display) settings for the camera, including date /time, camera name, etc.

Steps:

1. Enter the OSD Configuration interface.
   Menu > Camera > OSD
2. Select the camera to configure OSD settings.
3. Edit the Camera Name in the text field.
4. Configure the Display Name, Display Date and Display Week by clicking the checkbox.
5. Select the Date Format, Time Format and Display Mode.

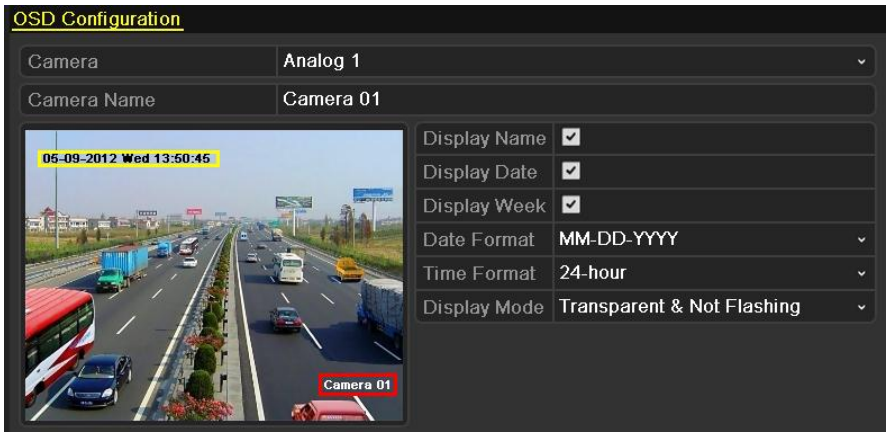


Figure 10.1 OSD Configuration Interface

6. You can use the mouse to click and drag the text frame on the preview window to adjust the OSD position.
7. Copy Camera Settings
   1) If you want to copy the OSD settings of the current camera to other cameras, click the **Copy** button to enter the Copy Camera interface.

Figure 10.2 Copy Settings to Other Cameras

   2) Select the camera (s) to be configured with the same OSD settings. You can also click the checkbox of Analog to select all cameras.
   3) Click the **OK** button to finish the Copy settings and back to the OSD Configuration interface.
8. Click the **Apply** button to apply the settings.
   Note: You can also click the **Restore** to restore the current OSD settings to the default parameters.

10.2 Configuring Privacy Mask

Purpose:

You are allowed to configure the four-sided privacy mask zones that cannot be viewed by the operator.

Steps:

1. Enter the Privacy Mask Settings interface.

   Menu > Camera > Privacy Mask

2. Select the camera to set privacy mask.
3. Click the checkbox of **Enable Privacy Mask** to enable this feature.

Figure 10.3 Privacy Mask Settings Interface

4. Use the mouse to draw a zone on the window. The zones will be marked with different frame colors.

Note: Up to 4 privacy mask zones can be configured, and the size of each area can be adjusted.

5. The configured privacy mask zones on the window can be cleared by clicking the corresponding Clear Zone1-4 icons on the right side of the window, or click **Clear All** to clear all zones.

Figure 10.4 Set Privacy Mask Area

6. You can click the **Copy** button to copy the privacy mask settings of the current camera to other cameras. Please refer to step 7 of *Chapter 10.1 Configuring OSD Settings*.
7. Click the **Apply** button to save the settings.

   Note: You can also click the **Restore** to restore the current OSD settings to the default parameters.

10.3 Configuring Video Parameters

Steps:

1. Enter the Image Settings interface.

   Menu > Camera > Image

2. Select the camera to set image parameters.
3. Set the period of a day for configuring independent image parameters so as to satisfy different light conditions, e.g., daylight and night time. Two periods can be configured. When you have configured Period 1, the Period 2 is remained as the *Other Time*.

Figure 10.5 Image Settings Interface

4. Select the mode from the drop-down menu according to different light conditions.

   Four modes are selectable:

   - **Standard**: in general lighting conditions (default).
   - **Indoor:** the image is relatively smoother.
   - **Dim Light:** the image is smoother than the other three modes.
   - **Outdoor:** the image is relatively clearer and sharper. The degree of contrast and saturation is high.

5. Adjust the image parameters including the brightness, contrast, saturation, hue, sharpness and denoising level by moving the sliding bar or increasing/decreasing the value.

   Note: When you select different mode, corresponding default parameters are available. You can also adjust the value of the brightness, contrast, saturation and hue to 0~ 255, the sharpness to 0~ 15 and the denoising level to 0~ 5.

6. You can click the **Copy** button to copy the image settings of the current camera to other cameras. Please refer to step 7 of *Chapter 10.1 Configuring OSD Settings*.
7. On the Image Settings interface, click the **Apply** button to save the settings.

Note: you can click the **Restore** button to restore the current image settings to default parameters.

C H A P T E R 1 1

Device Management and Maintenance

11.1 Viewing System Information

11.1.1 Viewing Device Information

Steps:

1. Enter the System Information interface.
   Menu > Maintenance > System Info
2. Click the **Device Info** tab to enter the Device Information menu to view the device name, model, serial No. , firmware version and encoding version.

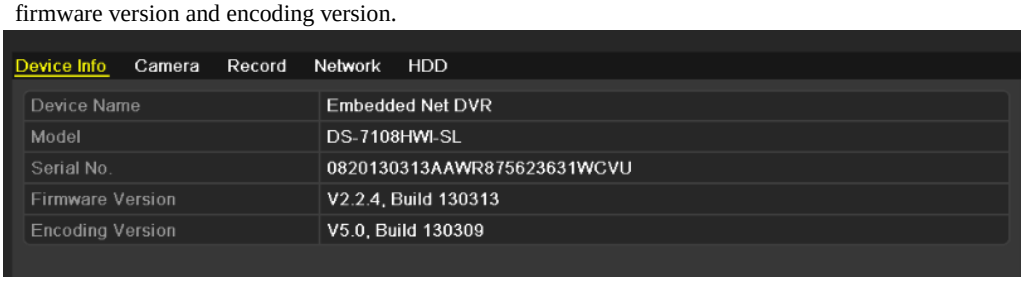


Figure 11.1 Device Information Interface

11.1.2 Viewing Camera Information

Steps:

1. Enter the System Information interface.
   Menu > Maintenance > System Info
2. Click the **Camera** tab to enter the Camera Information menu to view the status of each camera.

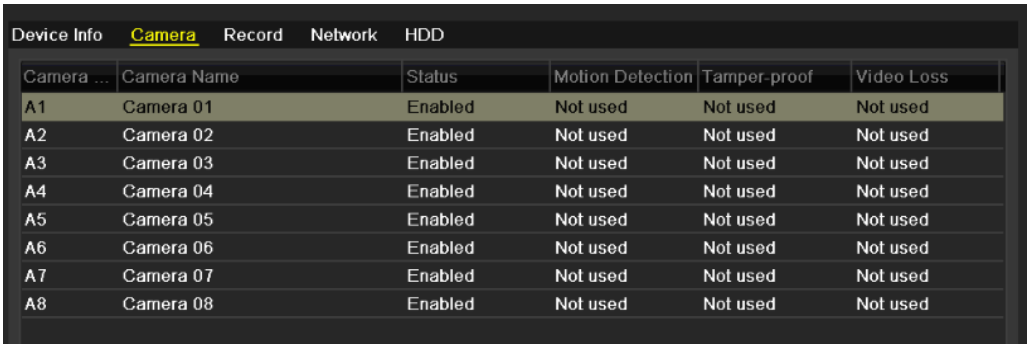

Device Info
Camera
Record
Network
HDD
Camera ...
Camera Name
Status
Motion Detection
Tamper-proof
Video Loss
A1 Camera 01 Enabled Not used Not used Not used
A2 Camera 02 Enabled Not used Not used Not used
A3 Camera 03 Enabled Not used Not used Not used
A4 Camera 04 Enabled Not used Not used Not used
A5 Camera 05 Enabled Not used Not used Not used
A6 Camera 06 Enabled Not used Not used Not used
A7 Camera 07 Enabled Not used Not used Not used
A8 Camera 08 Enabled Not used Not used Not used

Figure 11.2 Camera Information Interface

11.1.3 Viewing Record Information

Steps:

1. Enter the System Information interface.
   Menu > Maintenance > System Info
2. Click the **Record** tab to enter the Record Information menu to view the recording status and encoding

parameters of each camera.

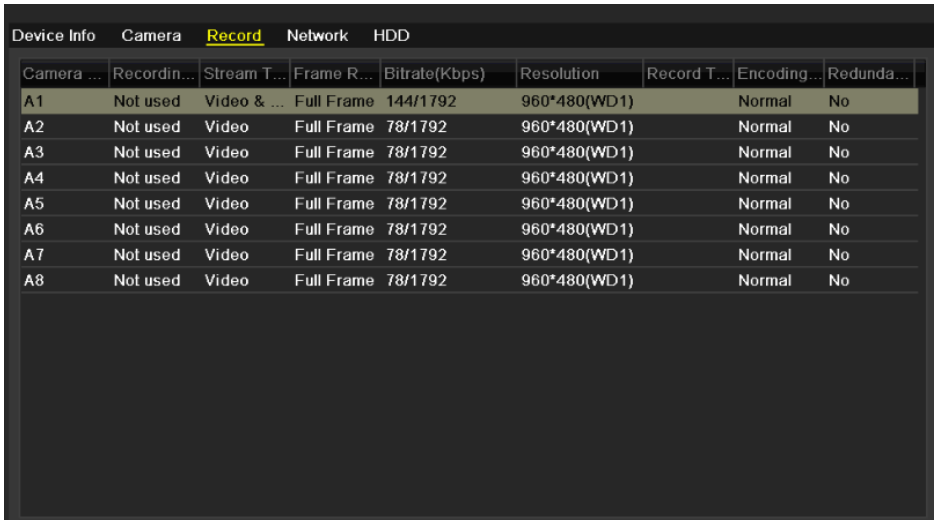

Device Info
Camera
Record
Network
HDD
Camera ...
Recordin...
Stream T...
Frame R...
Bitrate(Kbps)
Resolution
Record T...
Encoding...
Redunda...
A1 Not used Video & ... Full Frame 144/1792 960*480(WD1) Normal No
A2 Not used Video Full Frame 78/1792 960*480(WD1) Normal No
A3 Not used Video Full Frame 78/1792 960*480(WD1) Normal No
A4 Not used Video Full Frame 78/1792 960*480(WD1) Normal No
A5 Not used Video Full Frame 78/1792 960*480(WD1) Normal No
A6 Not used Video Full Frame 78/1792 960*480(WD1) Normal No
A7 Not used Video Full Frame 78/1792 960*480(WD1) Normal No
A8 Not used Video Full Frame 78/1792 960*480(WD1) Normal No

Figure 11.3 Record Information Interface

11.1.4 Viewing Network Information

Steps:

1. Enter the System Information interface.

   Menu > Maintenance > System Info

2. Click the **Network** tab to enter the Network Information menu to view the network information.

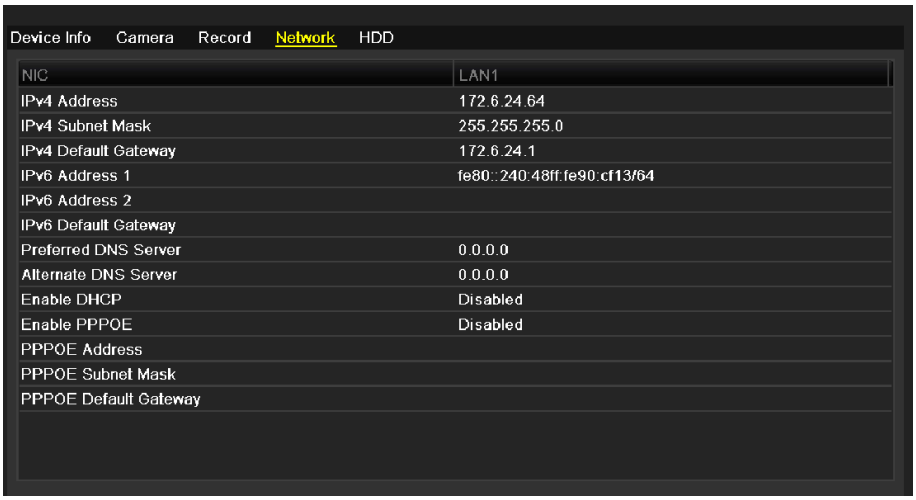


Figure 11.4 Network Information Interface

11.1.5 Viewing HDD Information

Steps:

1. Enter the System Information interface.

   Menu > Maintenance > System Info

2. Click the **HDD** tab to enter the HDD Information menu to view the HDD status, free space, property, etc.

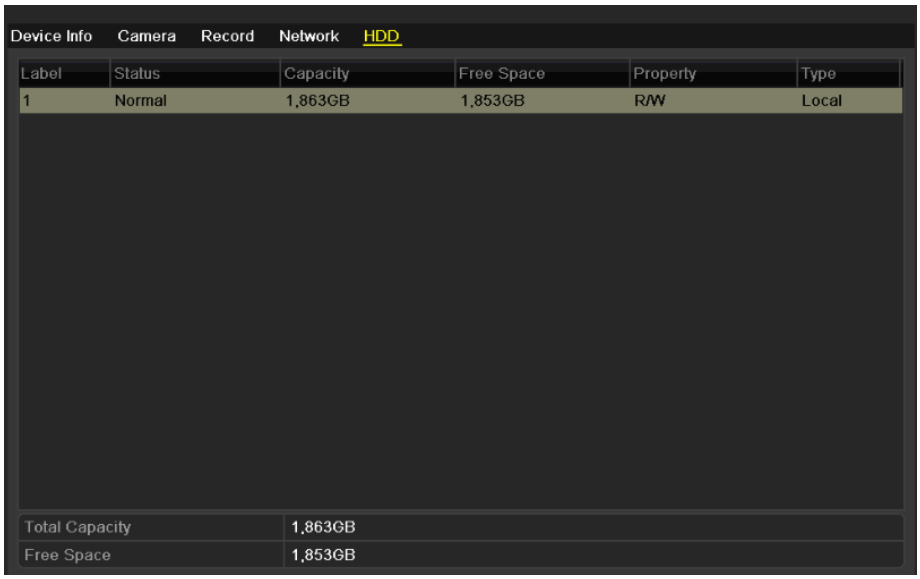


Figure 11.5 HDD Information Interface

11.2 Searching & Exporting Log Files

Purpose:

The operation, alarm, exception and information of the device can be stored in log files, which can be viewed and exported at any time.

Steps:

1. Enter the Log Search interface.

   Menu > Maintenance > Log Information

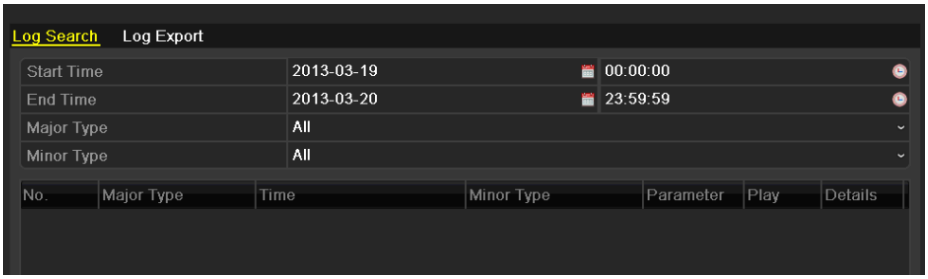


Figure 11.6 Log Search Interface

2. Set the log search conditions to refine your search, including the Start Time, End Time, Major Type and Minor Type.
3. Click the **Search** button to start searching log files.
4. The matched log files will be displayed on the list shown below.

Note: Up to 2000 log files can be displayed each time.

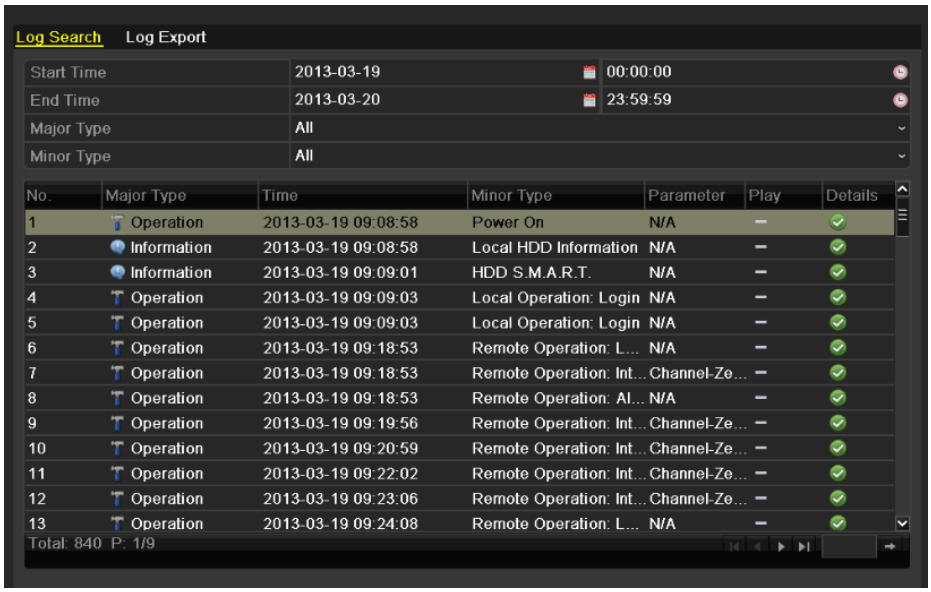

Log Search
Log Export
Start Time
2013-03-19
00:00:00
End Time
2013-03-20
23:59:59
Major Type
All
Minor Type
All
No.
Major Type
Time
Minor Type
Parameter
Play
Details
1 Operation 2013-03-19 09:08:58 Power On N/A
2 Information 2013-03-19 09:08:58 Local HDD Information N/A
3 Information 2013-03-19 09:09:01 HDD S.M.A.R.T. N/A
4 Operation 2013-03-19 09:09:03 Local Operation: Login N/A
5 Operation 2013-03-19 09:09:03 Local Operation: Login N/A
6 Operation 2013-03-19 09:18:53 Remote Operation: L... N/A
7 Operation 2013-03-19 09:18:53 Remote Operation: Int... Channel-Ze...
8 Operation 2013-03-19 09:18:53 Remote Operation: Al... N/A
9 Operation 2013-03-19 09:19:56 Remote Operation: Int... Channel-Ze...
10 Operation 2013-03-19 09:20:59 Remote Operation: Int... Channel-Ze...
11 Operation 2013-03-19 09:22:02 Remote Operation: Int... Channel-Ze...
12 Operation 2013-03-19 09:23:06 Remote Operation: Int... Channel-Ze...
13 Operation 2013-03-19 09:24:08 Remote Operation: L... N/A
Total: 840 P: 1/9

Figure 11.7 Log Search Results

5. You can click the button of each log or double click it to view its detailed information. And you can also click the button to view the related video files if available.

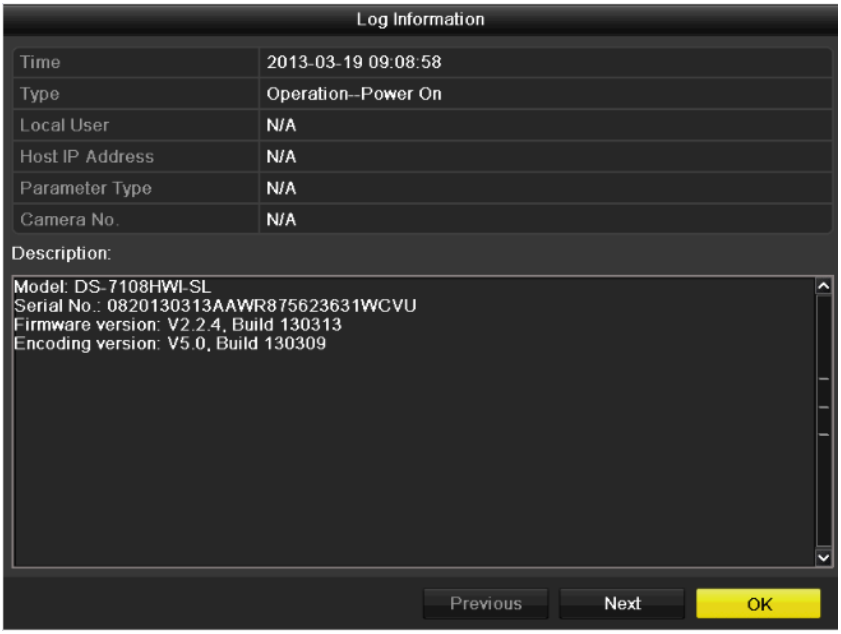


Figure 11.8 Log Details

6. If you want to export the log files, click the **Export** button to enter the Export menu.

   You can also export all the log files stored in the HDD.

   (1) Enter the Log Export interface.

   Menu > Maintenance > Log Information>Log Export

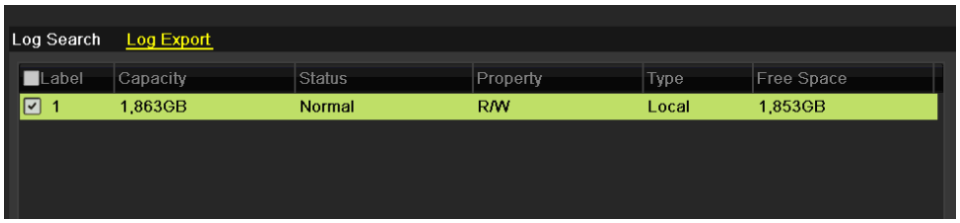


Figure 11.9 Log Export Interface

   (2) Check checkbox to select the HDD and click **Export** to enter the export interface.

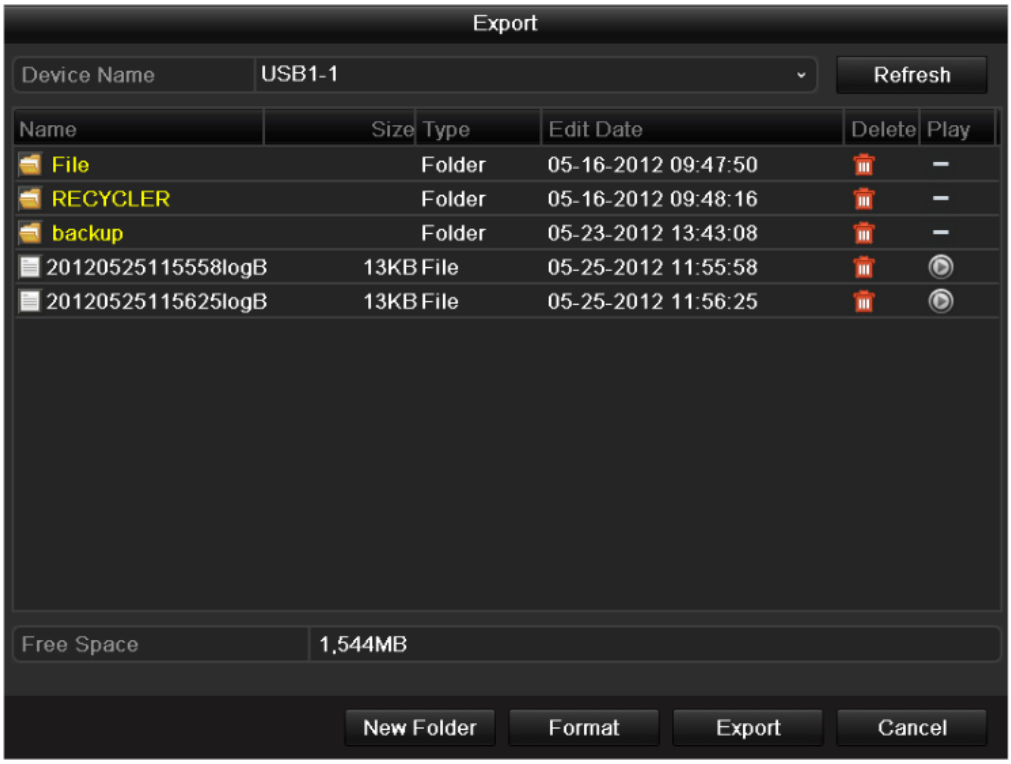


Figure 11.10 Export Log Files

7. Select the backup device from the dropdown list of **Device Name**.
8. Click the **Export** to export the log files to the selected backup device.

   You can click the **New Folder** button to create new folder in the backup device, or click the **Format** button to format the backup device before log export.

   Notes:

   1) Please connect the backup device to device before operating log export.

   2) The log files exported to the backup device are named by exporting time, e.g., *20110514124841logBack.txt*.

11.3 Importing/Exporting Configuration Files

Purpose:

The configuration files of the device can be exported to local device for backup; and the configuration files of one device can be imported to multiple device devices if they are to be configured with the same parameters.

Steps:

1. Enter the Import/Export Configuration File interface.

   Menu > Maintenance > Import/Export

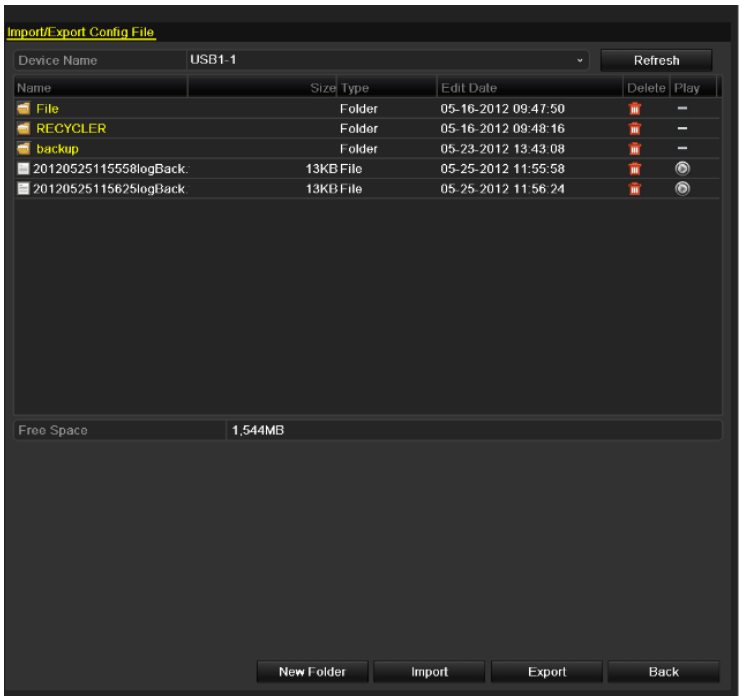


Figure 11.11 Import/Export Config File

2. Click the **Export** button to export configuration files to the selected local backup device.
3. To import a configuration file, select the file from the selected backup device and click the **Import** button. After the import process is completed, you must reboot the device.

Note: After having finished the import of configuration files, the device will reboot automatically.

11.4 Upgrading System

Purpose:

The firmware on your device can be upgraded by local backup device or remote FTP server.

11.4.1 Upgrading by Local Backup Device

Steps:

1. Connect your device with a local backup device where the update firmware file is located.
2. Enter the Upgrade interface.

   Menu > Maintenance > Upgrade
3. Click the **Local Upgrade** tab to enter the local upgrade menu.

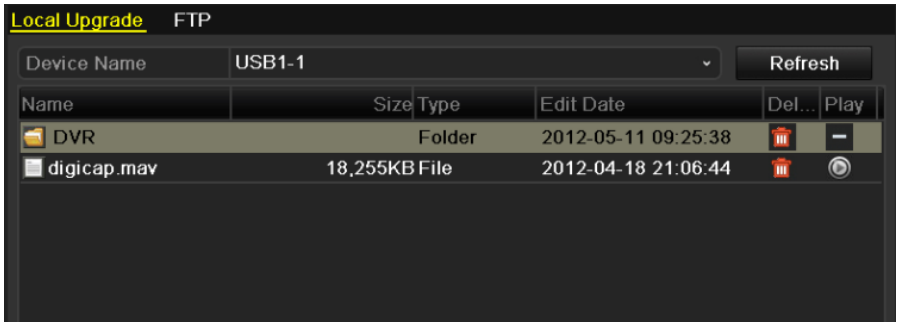


Figure 11.12 Local Upgrade Interface

4. Select the update file from the backup device.
5. Click the **Upgrade** button to start upgrading.
6. After the upgrading is complete, reboot the device to activate the new firmware.

11.4.2 Upgrading by FTP

Before you start:

Configure PC (running FTP server) and device to the same Local Area Network. Run the 3rd-party TFTP software on the PC and copy the firmware into the root directory of TFTP.

Steps:

1. Enter the Upgrade interface.

   Menu > Maintenance > Upgrade
2. Click the **FTP** tab to enter the local upgrade interface.

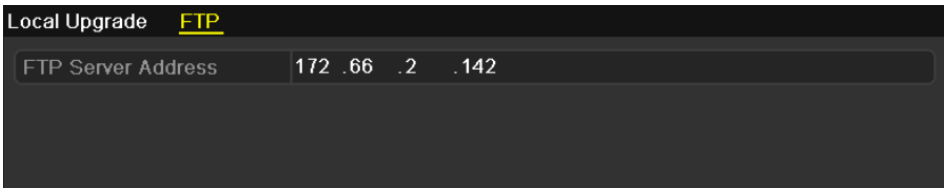


Figure 11.13 FTP Upgrade Interface

3. Enter the FTP Server Address in the text field.
4. Click the **Upgrade** button to start upgrading.
5. After the upgrading is complete, reboot the device to activate the new firmware.

11.5 Restoring Default Settings

Steps:

1. Enter the Default interface.

   Menu > Maintenance > Default

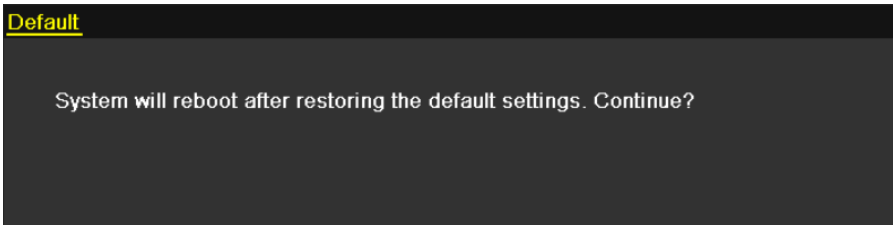


Figure 11.14 Restore Factory Default

2. Click the **OK** button to restore the default settings.

Note: Except the network parameters (including IP address, subnet mask, gateway, MTU and server port), all other parameters of the device will be restored to factory default settings.

C H A P T E R 1 2

Others

12.1 Configuring General Settings

Purpose:

You can configure the BNC output standard, VGA output resolution, mouse pointer speed, etc.

Steps:

1. Enter the General Settings interface.

   Menu > Configuration > General

2. Select the **General** tab.

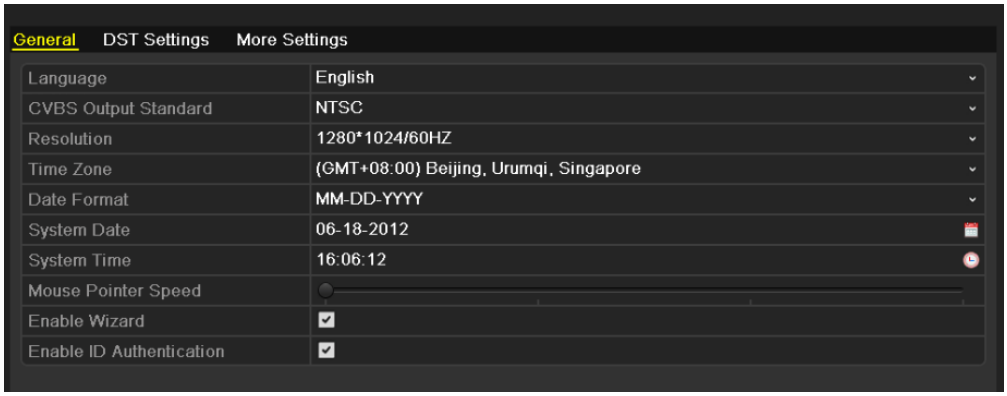


Figure 12.1 General Settings Interface

3. Configure the following settings:
   - **Language:** The default language used is *English*.
   - **CVBS Output Standard:** Select the CVBS output standard to NTSC or PAL, which must be the same with the video input standard.
   - **Resolution:** Select the VGA output resolution, which must be the same with the resolution of the monitor screen.
   - **Time Zone:** Select the time zone.
   - **Date Format:** Set the date format.
   - **System Date:** Select the system date.
   - **System Time:** Set the system time.
   - **Mouse Pointer Speed:** Set the speed of mouse pointer; 4 levels are configurable.
   - **Enable Wizard:** Enable/disable the Wizard when the device starts up.
   - **Enable ID Authentication:** Enable/disable the use of the login password.
4. Click the **Apply** button to save the settings.

12.2 Configuring DST Settings

Steps:

1. Enter the General Settings interface.
   Menu >Configuration>General
2. Choose **DST Settings** tab.

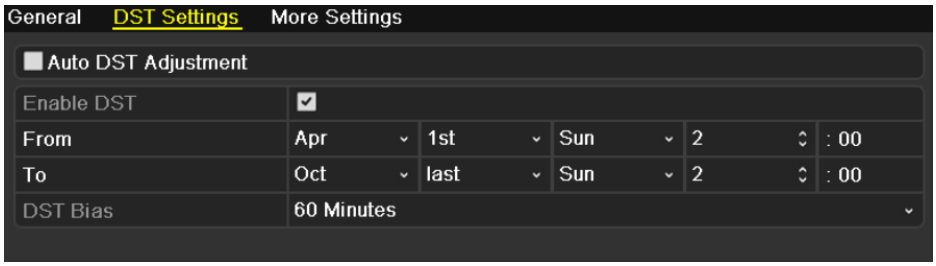


Figure 12.2 DST Settings Interface

You can check the checkbox before the **Auto DST Adjustment** item.

Or you can manually check the Enable DST checkbox, and then set the date of the DST period.

12.3 Configuring More Settings

Steps:

1. Enter the General Settings interface.
   Menu > Configuration > General
2. Click the **More Settings** tab to enter the More Settings interface.

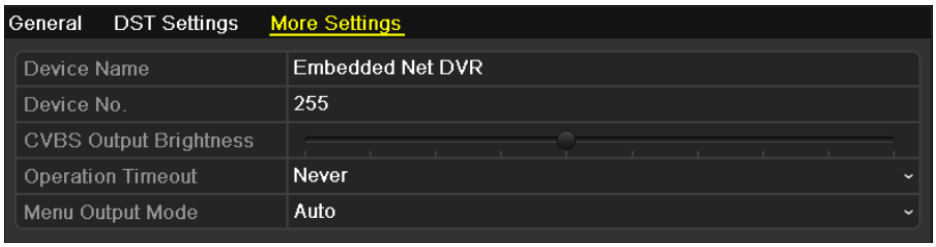


Figure 12.3 More Settings Interface

3. Configure the following settings:
   - **Device Name:** Edit the name of device.
   - **Device No.:** Edit the serial number of device. The Device No. can be set in the range of 1~255, and the default No. is 255.
   - **CVBS Output Brightness:** Adjust the video output brightness.
   - **Operation Timeout:** Set timeout time for menu inactivity. E.g., when the timeout time is set to *5 Minutes*, the system will exit from the current operation menu to live view screen after 5 minutes of menu inactivity.
   - **Menu Output Mode:** Select the menu output mode to Auto, VGA or Main CVBS.
     Notes:
     1. When you select **Auto**, the device can automatically detect the VGA output as the main output and the CVBS output as the auxiliary output when it starts up.
     2. After you have changed the output mode, you should restart the device to activate the new settings.
4. Click the **Apply** button to save the settings.

12.4 Managing User Accounts

Purpose:

There is a default account in the device: *Administrator*. The *Administrator* user name is *admin* and the password is *12345*. The *Administrator* has the permission to add and delete user and configure user parameters.

12.4.1 Adding a User

Steps:

1. Enter the User Management interface.

   Menu > Configuration > User

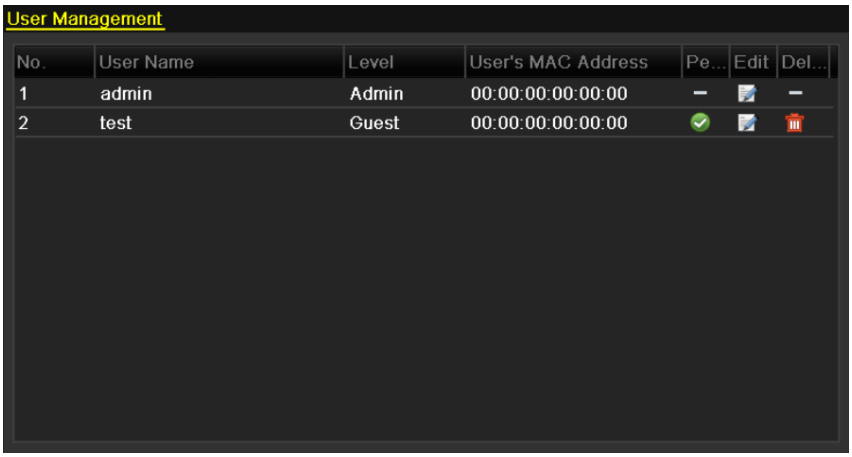


Figure 12.4 User Management Interface

2. Click the **Add** button to enter the Add User interface.

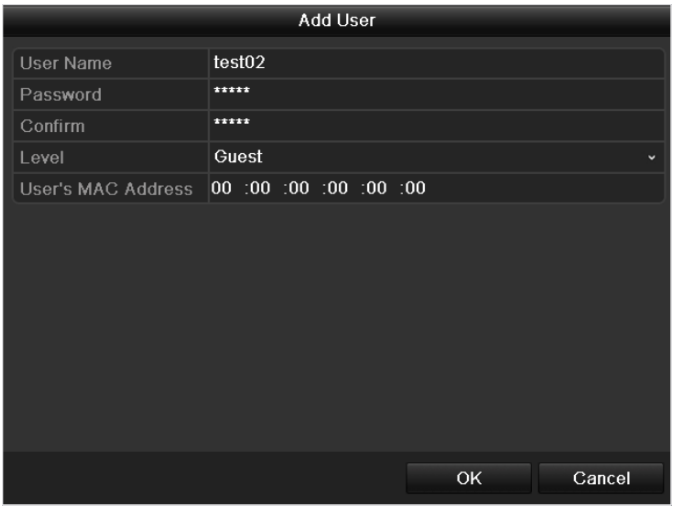


Figure 12.5 Add User Menu

3. Enter the information for new user, including **User Name**, **Password**, **Level** and **User's MAC Address**.

   Level: Set the user level to Operator or Guest. Different user levels have different operating permission.

- **Operator:** The *Operator* user level has permission of Local Log Search in Local Configuration, Remote Log Search and Two-way Audio in Remote Configuration and all operating permission in Camera Configuration.
- **Guest:** The Guest user has permission of Local Log Search in Local Configuration, Remote Log Search in Remote Configuration and only has the local/remote playback in the Camera Configuration.

User's MAC Address: The MAC address of the remote PC which logs onto the device. If it is configured and enabled, it only allows the remote user with this MAC address to access the device.

4. Click the **OK** button to save the settings and go back to the User Management interface. The added new user will be displayed on the list.

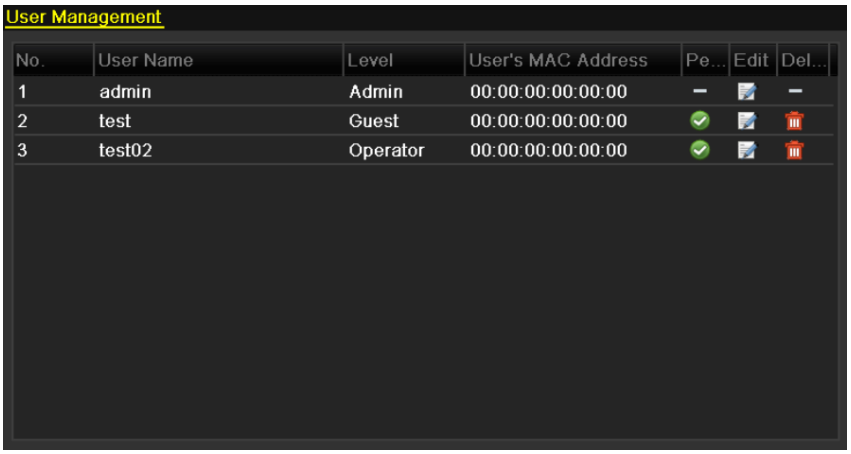


Figure 12.6 Added User Listed in User Management Interface

5. Select the user from the list and then click the button to enter the Permission settings interface.

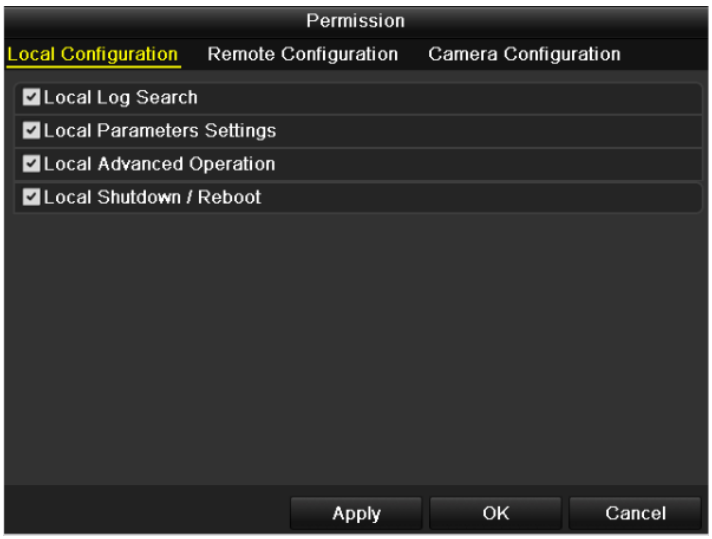


Figure 12.7 User Permission Settings Interface

6. Set the operating permission of Local Configuration, Remote Configuration and Camera Configuration for the user.

Local Configuration

- Local Log Search: Searching and viewing logs and system information of device.
- Local Parameters Settings: Configuring parameters, restoring factory default parameters and importing/exporting configuration files.
- Local Advanced Operation: Operating HDD management (initializing HDD, setting HDD

property), upgrading system firmware.

- Local Shutdown /Reboot: Shutting down or rebooting the device.

Remote Configuration

- Remote Log Search: Remotely viewing logs that are saved on the device.
- Remote Parameters Settings: Remotely configuring parameters, restoring factory default parameters and importing/exporting configuration files.
- Two-Way Audio: Realizing two-way radio between the remote client and the device.
- Remote Advanced Operation: Remotely operating HDD management (initializing HDD), upgrading system firmware.
- Remote Alarm Control: Remotely arming (notify alarm and exception message to the remote client).
- Remote Shutdown/Reboot: Remotely shutting down or rebooting the device.

Camera Configuration

- Remote Live View: Remotely viewing live video of the selected camera (s).
- Local Manual Operation: Locally starting/stopping manual recording of the selected camera (s).
- Remote Manual Operation: Remotely starting/stopping manual recording of the selected camera (s).
- Local Playback: Locally playing back recorded files of the selected camera (s).
- Remote Playback: Remotely playing back recorded files of the selected camera (s).
- Local Video Export: Locally exporting recorded files of the selected camera (s).

Note: You should select the camera (s) on the Camera Configuration interface for the operation permission configured.

7. Click the **OK** button to save the settings and exit interface.

Note: Only the *admin* user account has the permission of restoring factory default parameters.

12.4.2 Deleting a User

Steps:

1. Enter the User Management interface.

   Menu > Configuration > User

2. Select the user to be deleted from the list.

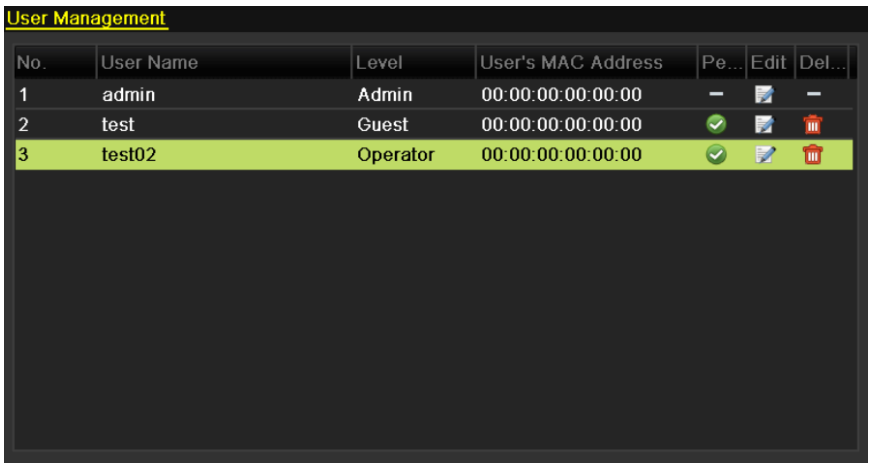


Figure 12.8 Delete a User

3. Click the icon to delete the selected user.

12.4.3 Editing a User

Steps:

1. Enter the User Management interface.
   Menu > Configuration > User
2. Select the user to be edited from the list.

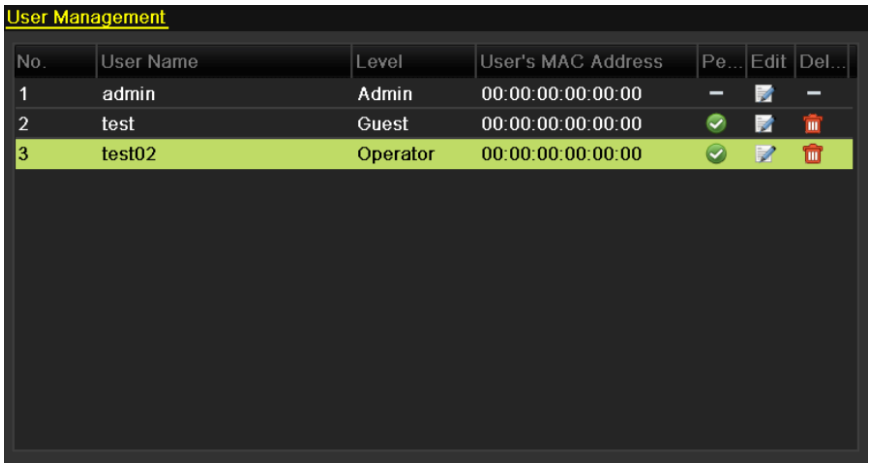


Figure 12.9 Edit a User

3. Click the icon to enter the Edit User interface.

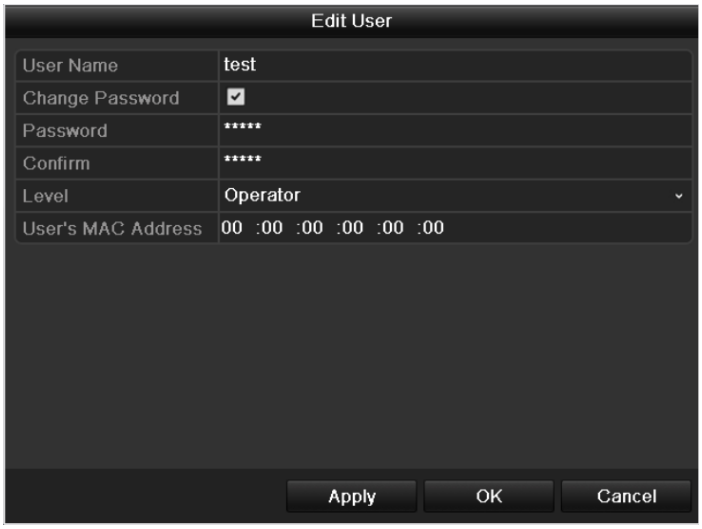


Figure 12.10 Edit User Interface

4. Edit the user information, including user name, password, level and MAC address.
5. Click the **OK** button to save the settings and exit the menu.

12.4.4 Changing Password of Admin

Purpose:

The password of the *admin* user account can be changed in the User Management menu.

Steps:

1. Enter the User Management interface.

   Menu > Configuration > User

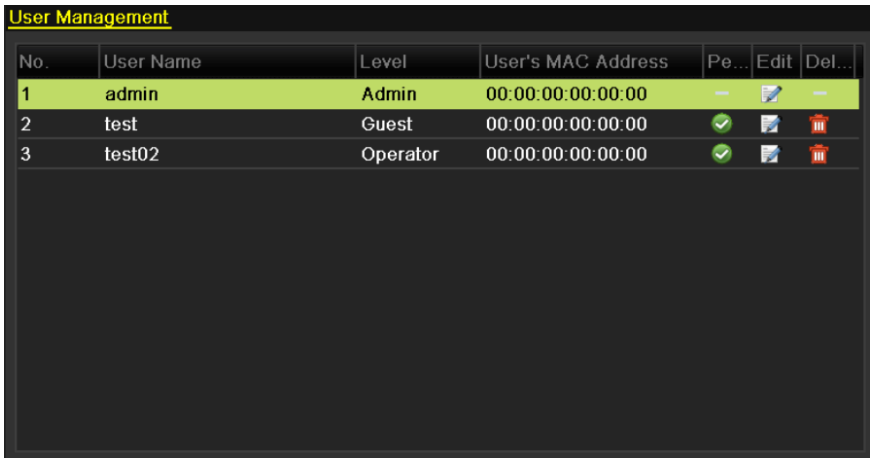


Figure 12.11 Change Password

2. Select the *admin* user and click to change the password.

Figure 12.12 Change Password

3. Enter the old password, check checkbox, enter new password and confirm password on the menu.
4. Click **OK** to save the settings and exit the menu.

12.5 Logging out/Shutting down/Rebooting Device

Steps:

1. Enter the Shutdown interface.

   Menu > Shutdown

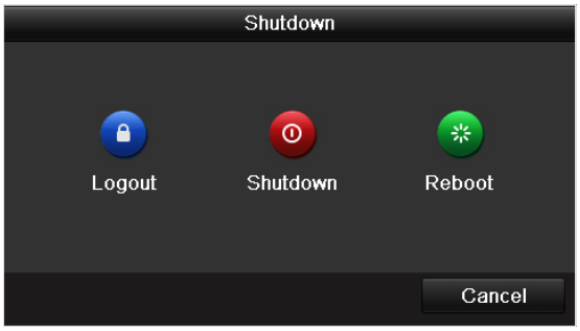


Figure 12.13 Shutdown Menu

2. Click the **Logout** button to log out, or

   Click the **Shutdown** button to shut down the device, or

   Click the **Reboot** button to reboot the device.

Note: After you have logged out the system, menu operation on the screen is invalid. It is required a user name and password to login the system.

C H A P T E R 1 4

Appendix

Glossary

- **Dual Stream:** Dual stream is a technology used to record high resolution video locally while transmitting a lower resolution stream over the network. The two streams are generated by the device, with the main stream having a maximum resolution of 4CIF and the sub-stream having a maximum resolution of CIF.
- **DVR:** Acronym for Digital Video Recorder. A DVR is device that is able to accept video signals from analog cameras, compress the signal and store it on its hard drives.
- **HDD:** Acronym for Hard Disk Drive. A storage medium which stores digitally encoded data on platters with magnetic surfaces.
- **DHCP:** Dynamic Host Configuration Protocol (DHCP) is a network application protocol used by devices (DHCP clients) to obtain configuration information for operation in an Internet Protocol network.
- **HTTP:** Acronym for Hypertext Transfer Protocol. A protocol to transfer hypertext request and information between servers and browsers over a network
- **PPPoE:** PPPoE, Point-to-Point Protocol over Ethernet, is a network protocol for encapsulating Point-to-Point Protocol (PPP) frames inside Ethernet frames. It is used mainly with ADSL services where individual users connect to the ADSL transceiver (modem) over Ethernet and in plain Metro Ethernet networks.
- **DDNS:** Dynamic DNS is a method, protocol, or network service that provides the capability for a networked device, such as a router or computer system using the Internet Protocol Suite, to notify a domain name server to change, in real time (ad-hoc) the active DNS configuration of its configured hostnames, addresses or other information stored in DNS.
- **Hybrid DVR:** A hybrid DVR is a combination of a DVR and NVR.
- **NTP:** Acronym for Network Time Protocol. A protocol designed to synchronize the clocks of computers over a network.
- **NTSC:** Acronym for National Television System Committee. NTSC is an analog television standard used in such countries as the United States and Japan. Each frame of an NTSC signal contains 525 scan lines at 60Hz.
- **NVR:** Acronym for Network Video Recorder. An NVR can be a PC-based or embedded system used for centralized management and storage for IP cameras, IP Domes and other DVRs.
- **PAL:** Acronym for Phase Alternating Line. PAL is also another video standard used in broadcast televisions systems in large parts of the world. PAL signal contains 625 scan lines at 50Hz.
- **USB:** Acronym for Universal Serial Bus. USB is a plug-and-play serial bus standard to interface devices to a host computer.

FAQ

- **Why does my device make a beeping sound after booting?**

The possible reasons for the warning beep on the device are as follows:

a) There is no HDD installed in the device.

b) The HDD is not initialized.

c) HDD error

To cancel the beeping sound and use the device without HDD, enter the Exception Settings interface. For detailed information, see *Chapter 7.4 Handling Exception*.

- **Why is there no video recorded after setting the motion detection?**

If there are no recorded video after setting the motion detection, please check:

a) The recording schedule is set up correctly by following the steps listed in *Chapter 4.2 Configuring Record Schedule*.

b) The motion detection area is configured correctly (See *Chapter 4.3 Configuring Motion Detection Record*).

c) The channels are being triggered for motion detection (See *Chapter 4.3 Configuring Motion Detection Record*)).

- **Why doesn't the device detect my USB export device for exporting recorded files?**

There's a chance that the device and your USB device is not compatible. Please refer to our company's website to view a list of compatible devices.

- **My device is in Live View mode and the menu does not show up. It does not respond to the mouse operation.**

Your device may be in auxiliary mode. Please refer to *Chapter 3.2.3 Main/Aux Output Switching* for the operation of main/aux output switching.